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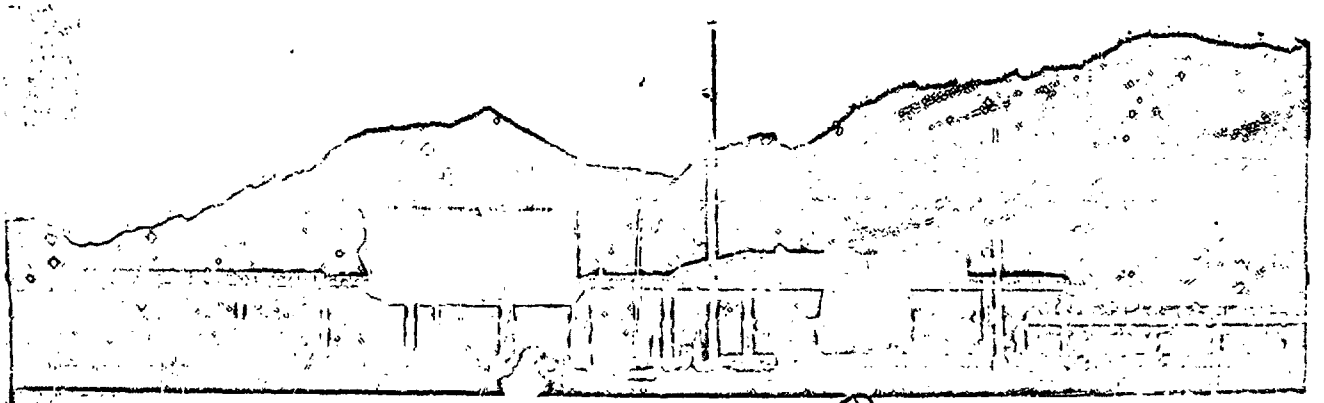

NBS REPORT

8808

A BIBLIOGRAPHY OF REFERENCES FOR THE THERMOPHYSICAL PROPERTIES OF HELIUM-4, HYDROGEN, DEUTERIUM, HYDROGEN DEUTERIDE, NEON, ARGON, NITROGEN, OXYGEN, CARBON DIOXIDE, METHANE, ETHANE, KRYPTON, AND REFRIGERANTS 13, 14, AND 23

Cryogenic Data Center

NBS

U. S. DEPARTMENT OF COMMERCE
NATIONAL BUREAU OF STANDARDS
BOULDER LABORATORIES
Boulder, Colorado

THE NATIONAL BUREAU OF STANDARDS

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* Located at Boulder, Colorado 80301.

** Located at 5285 Port Royal Road, Springfield, Virginia 22171.

NATIONAL BUREAU OF STANDARDS REPORT

NBS PROJECT

31502-40-3150121
31502-40-3150626

May 1965

NBS REPORT

NI -8808

A BIBLIOGRAPHY OF REFERENCES FOR THE THERMOPHYSICAL PROPERTIES
OF
HELIUM-4, HYDROGEN, DEUTERIUM, HYDROGEN DEUTERIDE, NEON, ARGON,
NITROGEN, OXYGEN, CARBON DIOXIDE, METHANE, ETHANE, KRYPTON,
AND
REFRIGERANTS 13, 14, AND 23

Cryogenic Data Center

NBS

U.S. DEPARTMENT OF COMMERCE
NATIONAL BUREAU OF STANDARDS

A BIBLIOGRAPHY OF REFERENCES FOR THE THERMOPHYSICAL PROPERTIES OF HELIUM-4, HYDROGEN, DEUTERIUM, HYDROGEN DEUTERIDE, NEON, ARGON, NITROGEN, OXYGEN, CARBON DIOXIDE, METHANE, ETHANE, KRYPTON, AND REFRIGERANTS 13, 14, AND 23[1]

Introduction

This bibliography represents a search of the information storage and retrieval system of the Cryogenic Data Center. The storage and retrieval system contains approximately 11,000 references to properties of materials at cryogenic temperatures. The bibliography contains references to the following fluids and their mixtures: helium-4, normal hydrogen, parahydrogen, orthohydrogen, deuterium and hydrogen deuteride, neon, argon, nitrogen, oxygen, carbon dioxide, methane, ethane, krypton, and refrigerants 13, 14, and 23. The properties which were searched for are: PVT data, compressibility, expansivity, vapor pressure, melting line, triple point, boiling point, critical point, solid transition points, phase diagram, latent heats, heat capacity, enthalpy, entropy, velocity of sound, thermal conductivity, viscosity, equations of state, Joule-Thomson coefficient, and surface tension.

The Cryogenic Data Center is engaged in maintaining an awareness of the world's literature on the properties of materials at cryogenic temperatures and in particular on the properties of the cryogenic fluids. Other fluids of some cryogenic interest are also noted for the system but to a lesser degree of exhaustivity; therefore, the references to the properties of carbon dioxide, ethane, krypton and refrigerants 13, 14, and 23 represent a smaller proportion of the world's literature than for the predominantly cryogenic fluids.

The bibliography contains an index which lists, for each fluid, entries for all of the properties mentioned above. The references are arranged in numerical order by accession number. Each reference is followed by the indexing information used in the storage and retrieval system. The first of this is the characteristic coding which is explained on page iv. This is followed by the coordinate indexing terms used for that reference.

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[1] This bibliography was made for Air Products and Chemicals, Inc., Allentown, Pennsylvania, for use on a government contract.

CHARACTERISTIC CODING DESIGNATIONS for CRYOGENIC LITERATURE

Categories

A-1: Books, Reviews, Surveys, Bibliographies, Proceedings, etc.
A-2: Properties of Solids
A-3: Properties of Fluids
A-4: Solid State, Theoretical, Phenomena, Basic Physics, etc.
A-5: Cryogenic Techniques, Tricks, Unique Methods, Unusual Procedures, etc.
A-6: Cryogenic Processes, Heat Transfer, Purification, Fluid Flow, Liquefaction, Safety Procedures, etc.
A-7: Laboratory Equipment and Instrumentation
A-8: Cryogenic Equipment
A-9: General Interest Literature, News, Management, Programs, Accidents, Miscellaneous

Language

B-1: English, B-2 French, B-3 German, B-4 Dutch, B-5 Italian, B-6 Japanese, B-7 Russian, B-8 Spanish, B-9 Other

Cryogenic Interest

C-1: Cryogenic Temperature Range (0 to 130°K where not specifically designated in C-4 through C-7 below)
C-2: Cryogenic Interest but not in Cryogenic Temperature Range (except where designated C-8)
C-3: Not of Direct Cryogenic Interest
C-4: Below 1°K
C-5: 1 to 10°K
C-6: 10 to 50°K
C-7: 50 to 130°K
C-8: 130 to 300°K

Form of Data (Omitted where not pertinent)

D-1: Numerical Data Included
D-2: No Data
D-3: Graphical Data Only

Type of Article (Omitted where not pertinent)

E-1: Experimental, Experimental and Theoretical, Original Work
E-2: Review Article, Compilation, Correlation, Discussion
E-3: Theoretical Only, No Specific Data Given

Availability of Document (suggested source)

F-1: Cryogenic Engineering Laboratory
F-2: National Bureau of Standards
F-3: Office of Technical Services (OTS)
F-4: U.S. Government Printing Office
F-5: Armed Forces Technical Information Agency (ASTIA)
F-6: Technical Libraries Generally (Published Literature)
F-7: Technical Libraries - Special (Foreign Literature - Special Periodicals)
F-8: Company Bulletins and Reports (Universities, Research Labs., etc.)
F-9: Other (Patents, Theses, Translations, etc.)

Form of Document

G-1: Published - Open Literature, Journals, etc.
G-2: Books, Proceedings
G-3: Company Periodicals (includes University, Foreign Gov't, State Institutions, etc.)
G-4: Government Periodicals (U.S.)
G-5: Company Reports, Private, Public, Gov't Contract (includes Foreign Gov't Reports)
G-6: Government Reports (U.S.)
G-7: University Theses, Doctoral Dissertations, Master's Theses
G-8: Patents (U.S. and Foreign)
G-9: Other (Unpublished, Informal, Preprints, Letters, Notes, Term Papers, Talks, etc.)

PROPERTY INDEX LOCATIONS FOR THE FLUIDS

BIBLIOGRAPHY INDEX

HELIUM 4 OR UNSPECIFIED HELIUM

PVT DATA (INCLUDES DENSITY AND COMPRESSIBILITY FACTOR)

128	203	211	378	420	429	473	479	487	534
610	625	690	700	737	782	801	836	982	1520
1689	2020	2171	2772	3498	3754	4900	5080	5139	5345
5563	5567	5572	5614	5714	5738	5869	5870	5904	5946
5982	6091	6193	6279	6296	6317	6326	6328	6342	6357
6565	6644	6713	6718	6773	6774	6788	6803	6804	6926
6953	7017	7324	7355	7356	7362	7505	8044	8703	8704
8732	8758	9034	9076	9154	9249	9409	9572	9729	9731
9732	9768	10246	10293	10329	10647	10677	10991	11005	11133
11138	11139	11140	11238	11245	11246	11276	11280	11429	11802
11881	11960	11986	11991	12018	12034	12074	12501	12502	12701
12704	12710	12725	12739	12795	12829	12895	13036	13114	13250
13259	13292	13420	13465	13623	13626	13639	13643	13646	13703
13882	14394	14963	14990	15065	15255	15411	15653	15993	15994
16073	16099	16233	16292	16294	16304	16339	16365	16374	16404
16696	16835	16836	16889	16891	17960	18047	18132	18172	18179
19117	19119	19180	19705	19709	19711	20647	21078	21337	21414
22010	22807	22933	22939	22955	23065	23170	23171	23399	24286
24414	25268								

COMPRESSIBILITY

378	442	487	534	650	826	1174	3754	5589	5590
5904	6091	6765	6776	6995	7297	7355	8044	11238	11802
12070	12074	13497	14603	15411	18047	18179	20896	23165	24286
24940	25082								

EXPANSIVITY (INCLUDES COEFFICIENT OF THERMAL EXPANSION)

378	411	625	632	3754	5112	5114	5640	5946	6193
6765	7297	7324	7355	9076	9569	10329	10699	11770	11881
12018	12070	12074	12689	13036	13128	13129	13465	13536	15065
15993	16233	16365	18047	18179	20065	20896	21337	23171	

VAPOR PRESSURE

425	480	610	700	817	2020	2171	3351	3429	3671
5328	5368	5596	5622	5816	5842	5865	5963	6004	6010
6120	6317	6326	7424	7505	8285	9249	9269	9409	10744
10760	10991	11246	11318	11429	12018	12204	12422	12710	13130
13161	13228	13359	13466	13625	13822	13903	13925	14072	14073
14207	14394	14718	14797	14798	14990	16293	16339	16340	16356
16744	16791	18126	18172	19287	19410	21135	22010	22832	22955
22966	24286	24840							

MELTING LINE DATA

211	490	986	1594	2171	2772	5644	5650	5721	5869
5870	5871	5915	5946	5955	6022	6057	6120	6222	6279
6300	9249	10030	10246	11153	11770	11881	12018	12034	12070
12158	12204	13036	13161	13735	14423	14621	15411	16290	16294
16321	16362	16363	16365	16374	16404	16871	17275	18088	19448
19776	20065	22009	23161	23165	23170	23171	24286		

TRIPLE POINT

NONE

HELIUM (CONT.)

BOILING POINT

610 5622 6326 6334 11001 12034 12204 13161 13903 14072
14423 14990 15708

CRITICAL POINT

542 562 700 737 940 5564 5567 5572 5808 5865
6049 6105 6222 6326 6342 8044 8285 9249 9501 10194
11136 12034 12204 14798 14990 15024 16375 16404 17336 17625
18042 21134 21135 25062

SOLID TRANSITION POINTS

15329 16703 17607 17935 17945 18075 21802 21990 23165 23171

PHASE DIAGRAM

5370 5871 6120 10030 12070 16233 16294 16338 22299 23165
24286

LATENT HEAT (INCLUDES HEATS OF FUSION, SUBLIMATION AND VAPORIZATION)

535 610 1595 2020 3351 5368 5370 5572 5697 5869
5870 5928 6020 6279 6300 6317 6337 6357 6953 8285
9249 9269 9409 11335 12018 12034 12204 12710 13822 14394
14990 15064 16233 16339 16404 18179 19287 20647 22009 22933
22939 22955 24286

HEAT CAPACITY

34 128 204 375 435 446 610 625 678 692
700 710 736 877 902 1565 1778 2020 2171 3272
3867 5114 5370 5432 5489 5572 5682 5693 5714 5726
5757 5814 5963 5968 5972 5978 6105 6112 6120 6148
6217 6221 6253 6257 6266 6279 6300 6317 7424 7505
7835 7837 8698 9249 9409 9501 9569 9729 9731 9768
10329 10699 10882 10913 10963 11068 11276 11716 11770 11802
11986 11991 12018 12074 12689 12792 13292 13296 13420 13641
13759 13822 13903 14394 14990 15065 15419 15740 16124 16125
16233 16283 16288 16317 16366 16367 16404 16703 17144 17166
18026 18179 18844 18948 19117 19186 19709 20550 21337 22007
22299 22933 23171 23179 23270 23171 23558 23628 24286 24326
25065 25604

ENTHALPY

736 776 2020 5080 6257 7505 9409 9729 9768 10328
10882 11276 11429 11921 12501 12502 12792 12795 13259 13292
13703 15740 17166 23791 25065

ENTROPY

128 378 625 734 776 877 902 942 1565 2020
3867 5080 5489 5512 5515 5693 5963 5968 6057 6120
6257 6278 6296 7505 8285 9409 9729 9731 10030 10703
10882 10991 11276 11716 11881 11921 11986 12792 12795 13259
13292 13703 14394 15419 15740 16337 16365 16366 16375 16516
17166 19709 22299 23558 24286 25062 25604

HELIUM (CONT.)

VELOCITY OF SOUND

34	378	678	691	692	710	812	826	837	952
953	954	955	1054	1077	1106	1154	1182	1393	1464
1465	1467	1549	1565	2171	3729	5109	5110	5114	5342
5353	5416	5572	5654	5757	5759	5813	5814	5929	6155
6175	6176	6812	7035	7835	7837	7839	7841	9249	9501
9768	10030	10794	11276	11414	12642	12704	13296	13431	13632
13679	14325	14394	14412	14603	15021	15326	15948	16233	17607
17935	18033	18736	18851	19117	20585	21123	22299	24286	24609
24610	24611	24940							

THERMAL CONDUCTIVITY

378	418	446	580	592	617	686	693	714	724
932	935	999	1295	1464	1870	2020	2171	3479	5080
5084	5095	5138	5333	5370	5376	5385	5432	5461	5471
5472	5520	5572	5573	5650	5686	5696	5760	5784	5889
5910	5911	5912	5959	5992	6005	6031	6068	6070	6106
6151	6164	6217	6323	6332	6738	8024	8313	8507	8692
8700	9249	9409	9484	9697	10461	10593	10699	10731	10738
10913	10914	11035	11038	11042	11068	11276	11415	11429	11500
11696	11847	11987	12018	12068	12353	12788	12895	12977	13081
13420	13633	13636	13639	13647	14349	14418	14480	14622	14729
14730	14732	14734	14735	14761	14775	14990	15144	15414	15451
15992	16000	16152	16217	16233	16296	16303	16317	16404	16502
16755	16878	16879	16886	17393	17454	17558	17638	17875	17994
18001	19179	20390	20431	20923	20975	22429	22613	22812	22931
23138	22299	23160	23169	23628	24286	24312	25052	25237	25261
25293									

VISCOSITY

374	378	418	429	446	458	471	530	588	615
700	877	903	938	940	948	962	982	999	1106
1210	1246	2020	2137	2171	3284	3948	5080	5084	5089
5094	5095	5132	5133	5134	5370	5432	5507	5573	5649
5703	5706	5714	5749	5807	5920	5959	5981	5982	6054
6061	6120	6131	6151	6154	6164	6182	6339	6340	6344
6729	6738	7400	8024	8137	8645	8700	8758	9249	9409
9484	9607	10579	10619	10626	10669	10703	10731	10744	10747
10749	10753	10913	11035	11036	11068	11118	11276	11429	11487
11500	11696	11745	11831	11832	12018	12631	12977	13113	13114
13270	13420	13623	13624	13628	13636	13639	13643	13646	13647
14349	14394	14480	14597	14990	15024	15087	15376	15414	15416
15653	15991	15995	16152	16233	16296	16302	16317	16888	16889
17145	17393	17538	17558	17721	17964	17998	17999	18000	18015
18055	18994	19072	19117	19180	19280	19286	19617	19990	20342
20390	20975	21305	22299	22497	23031	23310	23628	24286	24300
24311	24312	24320	24326	24542	25000	25055	25237	25293	

HELIUM (CONT.)

EQUATIONS OF STATE (INCLUDES VIRIAL COEFFICIENTS)

420 442 478 492 542 565 625 650 669 710
782 796 801 836 996 1510 5139 5384 5759 5808
5967 6194 6229 6326 6328 6718 6776 6803 6812 6926
6927 6929 6959 6995 7324 7356 7466 7837 8044 8107
8331 8373 8399 8645 8700 8732 8760 9249 9545 9569
9572 9732 10293 10647 10677 10846 10989 11005 11133 11136
11138 11139 11140 11245 11280 11960 12621 12725 12739 12795
12829 12855 14248 14621 14622 14766 14963 15014 15024 16871
16891 17336 17663 17960 18839 18852 19308 19705 19709 21078
21695 22425 22894 22955 23392 23791 24321 24744 25062 25268
25699

JOULE-THOMSON EFFECT

464 736 8700 9249 9569 10194 10328 10677 10846 11237
11457 12795 13759 14232 15255 15648 18026 19693 22237

SURFACE TENSION

378 944 2020 5108 5370 9409 12018 12914 13642 13846
16233 16834 17722 18845 19704 19792 20647 23186 24286 24339
24780

NORMAL OR UNSPECIFIED HYDROGEN

PVT DATA (INCLUDES DENSITY AND COMPRESSIBILITY FACTOR)

203	318	427	453	486	487	493	494	517	575
619	634	649	700	727	728	737	801	852	853
1130	1152	1603	2020	2208	3498	3525	3754	4900	5118
5120	5122	5123	5139	5215	5366	5429	5522	5523	5542
5564	5567	5665	5904	6064	6069	6080	6091	6149	6191
6193	6231	6318	6326	6328	6342	6368	6415	6421	6565
6621	6713	6718	6768	6802	6840	6912	6914	6926	6928
7010	7103	7146	7355	7362	7395	7558	7589	7611	7613
7681	7748	7852	7889	8044	8096	8118	8401	8703	8715
8716	8717	8719	8732	8758	8762	9008	9409	9444	9492
10437	10647	10677	10742	10748	10839	11005	11043	11114	11137
11238	11242	11245	11280	11346	11429	11625	11690	11709	11924
12018	12034	12194	12258	12381	12485	12540	12704	12725	12791
12817	12854	12895	13036	13250	13537	13546	13558	13743	13781
13782	13832	13923	14023	14487	14535	14794	14800	14989	14990
15022	15073	15255	15490	15710	16097	16098	16099	16106	16107
16142	16213	16295	16308	16376	16378	16447	16876	16883	16891
17018	17021	17398	17960	17965	18121	18167	18512	19187	19613
19645	19652	19697	19709	19896	20642	20645	20646	20647	21078
21079	21132	21136	21794	21824	21853	22241	22243	22666	22920
23065	23393	23598	23790	23817	24116	24322	24336	24782	25268
25355	25544	25559							

COMPRESSIBILITY

34	442	487	728	1152	1174	2728	3754	5118	5719
5756	5879	5904	6014	6091	6765	6768	6776	6995	7297
7355	7474	8044	8207	8208	9963	11238	11613	12357	12820
13558	13780	14990	15022	15481	16295	17018	19645	20896	20897
22666	25355								

EXPANSIVITY (INCLUDES COEFFICIENT OF THERMAL EXPANSION)

487	728	1152	3754	5215	6149	6191	6193	6765	7297
7355	7460	8118	8717	9492	13036	13558	14800	15679	17018
17401	19687	20896	21136	22666	23172	25355			

VAPOR PRESSURE

444	453	454	493	634	700	2020	2040	2928	3405
5564	5677	5679	6016	6085	6235	6250	6326	6368	6376
6378	6759	7396	8366	8699	9409	10790	11043	11134	11247
11318	11429	12018	12166	12204	12485	13161	13463	13466	13537
13704	13770	13779	13914	13983	14329	14331	14680	14718	14799
14955	14957	14959	14990	15009	15024	15073	15490	16076	16219
16291	16376	16425	16868	18121	18582	18947	19187	19287	19410
19694	19721	21408	22243	22602	22687	23435	23478	23790	24274
24502	24745	24782	25096	25355					

MELTING LINE DATA

421	475	638	2169	5118	5449	6080	6300	6368	6421
11241	12018	12034	12204	13021	13036	13161	13735	13831	13923
14130	14423	14621	14989	16284	16286	16289	16364	16376	16425
18567	18947	19448	19652	21136	23172	23790	25544		

HYDROGEN (CONT.)

TRIPLE POINT

454 579 2040 2928 5564 5677 5679 6080 6326 6378
6421 8314 8325 8366 8699 9503 10958 11924 13537 14130
14799 14800 14990 15024 16376 19187 21824 22243 22923 22936
23790 24502 25355

BOILING POINT

1617 2040 2169 2928 5447 5643 5677 6235 6259 6326
6334 6378 6607 6621 6622 6628 8118 8699 9503 11001
11051 11247 12034 12204 13021 13161 13779 13923 14423 14709
14800 14959 14990 16076 16376 16701 19187 20893 22243 22936
23435 23790 24498 24502 24504 24506 24511

CRITICAL POINT

493 542 562 579 619 700 737 940 5542 5564
5567 5677 5808 6049 6105 6326 6342 6607 6610 6611
6852 8044 8699 9399 9501 10194 11051 11134 11136 12034
12166 12204 12485 13537 14794 14990 15024 16375 16826 17336
17625 18042 19187 21016 21134 22243 23790 25096

SOLID TRANSITION POINTS

NONE

PHASE DIAGRAM

19652

LATENT HEAT (INCLUDES HEATS OF FUSION, SUBLIMATION AND VAPORIZATION)

2020 2208 5491 5564 5928 6016 6300 6326 6368 6375
6376 6378 6421 7396 9409 9444 11043 11335 12018 12034
12204 12485 13021 13380 13831 13911 13923 13978 14799 14990
15490 16295 16361 16376 16868 18846 19187 19287 20647 21824
23790 24313 24782 25544

HEAT CAPACITY

204 224 275 446 453 485 528 616 622 633
657 700 728 746 848 849 850 855 856 1152
2020 2040 3142 3867 4591 5093 5095 5119 5170 5432
5437 5493 5536 5600 5679 5718 5722 5726 5756 5825
5831 5921 5990 6011 6029 6046 6105 6112 6113 6114
6177 6191 6217 6221 6253 6257 6266 6282 6300 6318
6326 6354 6362 6363 6368 6375 6378 6393 6421 6617
6813 6838 7010 7070 7248 7396 7747 7843 7896 8673
8698 8706 8710 9409 9444 9486 9501 9503 9752 10218
10742 10748 10872 10880 10882 10913 11043 11088 11271 11283
12018 12161 12197 12485 12611 13021 13271 13380 13537 13558
13831 13911 14530 14990 15269 15490 15525 15739 15740 16200
16213 16317 16877 17018 17166 17833 18026 18121 18501 18837
18838 19287 19645 19709 20550 21016 21132 21136 21750 21794
21806 21853 22251 22666 23172 23394 23790 24116 24314 24315
24316 24318 24323 24326 24332 24650 24651 24782 25096 25355
25559

HYDROGEN (CONT.)

ENTHALPY

419	453	463	520	616	658	728	746	848	849
850	854	856	1152	2020	2208	5493	5921	6063	6069
6257	6368	6393	6560	6838	8096	9409	10218	10742	10793
10882	10958	11041	11102	11271	11283	11429	11921	11929	12018
12161	12540	12637	13047	14023	15490	15739	15740	15818	16213
16447	17166	17398	18086	21750	21794	21853	23482	24116	24314
24782									

ENTROPY

224	275	453	508	520	528	561	616	657	658
728	746	848	849	850	854	856	1152	2020	2040
3867	5512	5990	6063	6069	6224	6257	6276	6281	6292
6368	6560	6617	6838	7396	8096	8130	9409	9444	9819
10218	10742	10882	11041	11102	11271	11283	11921	12161	12540
13047	13537	13737	14023	15739	15740	16375	16447	17166	17398
17833	18121	19709	21016	21136	21750	21794	21853	23790	24116
25355									

VELOCITY OF SOUND

34	453	552	595	678	720	1106	2274	3729	4591
5600	5756	5759	5810	5813	6161	6177	6347	6363	6816
6838	7070	7128	7262	7314	7387	7747	7839	7841	7843
7896	7916	8695	9444	9501	9963	10682	11709	12485	12611
12704	13099	13296	13558	14990	15021	16569	16877	17018	18121
18501	18851	19645	21794	21853	22052	22318	23790	24116	24318
24782	25355	25559							

THERMAL CONDUCTIVITY

446	453	592	604	617	628	654	693	695	724
765	999	2020	5093	5095	5432	5494	5501	5504	5528
5573	5727	5825	5889	5911	5959	6011	6027	6031	6068
6071	6151	6164	6169	6174	6217	6270	6271	6275	6318
6323	6368	6738	7010	8313	8384	8692	9244	9409	9435
9444	10218	10461	10548	10731	10748	10880	10913	10914	11010
11043	11291	11374	11429	11540	11669	11789	12018	12485	12489
12842	12895	12977	13476	13492	14418	14422	14480	14990	15144
15490	15525	15634	15651	16000	16296	16317	16502	17393	17454
17638	17994	18001	18490	18843	19179	20431	23787	23790	24312
24782	25237	25293	25293	25355					

HYDROGEN (CONT.)

VISCOSITY

207	374	446	450	453	461	530	546	604	615
618	700	940	962	995	999	1106	2020	3284	3948
5093	5094	5095	5132	5432	5507	5573	5600	5643	5703
5706	5711	5807	5825	5888	5892	5896	5959	6011	6061
6064	6110	6131	6151	6154	6164	6274	6275	6318	6334
6344	6368	6372	6738	7010	8293	8435	8645	8700	8758
9250	9409	9444	10218	10436	10539	10620	10623	10625	10731
10747	10748	10749	10753	10782	10880	10913	11036	11429	11487
11789	11806	11832	11899	11924	12018	12166	12631	12977	13113
13270	13476	13492	14272	14480	14622	14978	14990	15024	15087
15490	15525	16296	16317	17386	17393	17538	17962	17964	17999
18000	18917	18951	19280	19286	19617	20010	20011	20389	21305
21757	22249	22446	22496	23173	23448	23790	24007	24300	24311
24312	24313	24322	24326	24782	24925	25041	25055	25293	

EQUATIONS OF STATE (INCLUDES VIRIAL COEFFICIENTS)

442	453	494	517	542	565	575	634	669	727
801	995	1152	1845	3276	3541	5118	5139	5542	5759
5808	5967	6177	6191	6194	6230	6231	6325	6328	6334
6368	6376	6378	6415	6718	6733	6776	6852	6926	6927
6928	6929	6995	7278	7466	7589	7611	7681	7748	7852
8044	8107	8314	8331	8399	8435	8645	8732	8760	8762
8776	9481	9533	9545	10437	10647	10677	10846	10989	11005
11114	11136	11242	11245	11280	11346	11574	11899	12420	12424
12617	12621	12637	12725	12791	12855	13463	14487	14535	14621
14622	14625	14766	15024	16098	16200	16213	16308	16378	16832
16891	17336	17960	17965	18121	18178	18512	18839	18852	18917
19613	19697	19709	20642	20897	21078	21132	21794	22666	22920
23817	24007	24756	24914	25268	25355	25537			

JOULE-THOMSON EFFECT

419	424	463	464	622	3276	6191	6288	6838	10194
10677	10793	10846	11457	11690	13737	14232	15255	18026	18095
18121	18526	18949	21794	21853	22237				

SURFACE TENSION

2020	3541	9409	9444	10893	12018	12914	13537	13824	15490
16295	16834	19704	20647	23183	23186	23790	24780	24782	25058

PARAHYDROGEN

PVT DATA (INCLUDES DENSITY AND COMPRESSIBILITY FACTOR)

6084	6149	8118	8401	8732	9444	10930	11625	12194	12485
12540	12596	13420	13537	13558	14129	14990	15121	15358	15359
15490	15709	16447	17018	17442	18502	19187	19645	19652	20900
20943	21136	21747	21872	22243	23790	25302	25316	25544	

COMPRESSIBILITY

9963	13558	14990	17018	19645

EXPANSIVITY (INCLUDES COEFFICIENT OF THERMAL EXPANSION)

6149	8118	13558	17018	21136

VAPOR PRESSURE

454	2040	6235	12485	12596	12817	12830	13537	13704	13983
14990	15359	15490	16232	19187	20297	21754	22243	23435	23790
24731	25302								

MELTING LINE DATA

14130	15358	19652	20900	21136	21747	21872	23790	25302	25544

TRIPLE POINT

454	2040	8314	8325	9219	9490	9503	12830	13537	14130
14990	19187	21754	22243	23790	25302				

BOILING POINT

740	2040	6013	6235	8118	9490	9503	9624	12830	14990
19187	21754	22243	23435	23790	25302				

CRITICAL POINT

740	6013	6084	9624	12485	13537	14990	15359	19187	20900
21134	22243	23790							

SOLID TRANSITION POINTS

NONE

PHASE DIAGRAM

NONE

LATENT HEAT (INCLUDES HEATS OF FUSION, SUBLIMATION AND VAPORIZATION)

426	9219	9444	9624	12485	12596	12830	14990	15359	15490
16232	17442	19187	19652	20900	21747	21872	22428	23790	24731
25302	25544								

PARAHYDROGEN (CONT.)

HEAT CAPACITY

204	426	740	2040	5437	6013	6322	6416	6617	9219
9444	9503	10218	10930	11271	12161	12197	12485	12596	13420
13537	13558	13696	14129	14990	15490	16142	16163	16232	17018
17442	18502	19645	20900	21136	23790	24731	25302		

ENTHALPY

10218	10930	11271	12161	12540	12596	15490	16163	16447	18502
23482	25302								

ENTROPY

2040	6013	6617	9219	10218	10930	11271	12161	12540	12596
12830	13537	16163	16447	17442	21136	23790			

VELOCITY OF SOUND

552	3729	6347	9963	12485	13558	14990	15021	17018	19645
20900	22052	23790							

THERMAL CONDUCTIVITY

5528	8384	9444	9988	10218	11789	12485	13420	13476	13645
14422	14990	15490	18502	21747	23790	24731	25302		

VISCOSITY

461	1511	6232	8293	10218	10539	11789	11899	13420	13476
14990	15490	18502	23790	24731	25302				

EQUATIONS OF STATE (INCLUDES VIRIAL COEFFICIENTS)

6232	8314	8732	8776	11574	11776	11899	12817	15359	20900
20943									

JOULE-THOMSON EFFECT

20900									

SURFACE TENSION

13537	15490	23790	24028	24731					

ORTHOHYDROGEN

PVT DATA (INCLUDES DENSITY AND COMPRESSIBILITY FACTOR)
6368

COMPRESSIBILITY
NONE

EXPANSIVITY (INCLUDES COEFFICIENT OF THERMAL EXPANSION)
NONE

VAPOR PRESSURE
2040 6368 13983 16232

MELTING LINE DATA
6368

TRIPLE POINT
2040 8325

BOILING POINT
2040

CRITICAL POINT
NONE

SOLID TRANSITION POINTS
NONE

PHASE DIAGRAM
NONE

LATENT HEAT (INCLUDES HEATS OF FUSION, SUBLIMATION AND VAPORIZATION)
6368 16232 22428

ORTHOHYDROGEN (CONT.)

HEAT CAPACITY
2040 6368 6617 10218 12197 16163 16232

ENTHALPY
10218 16163

ENTROPY
2040 6617 10218 16163

VELOCITY OF SOUND
NONE

THERMAL CONDUCTIVITY
10218

VISCOSITY
1511 6232 10218

EQUATIONS OF STATE (INCLUDES VIRIAL COEFFICIENTS)
6232 8776 11574

JOULE-THOMSON EFFECT
NONE

SURFACE TENSION
NONE

DEUTERIUM OR HYDROGEN DEUTERIDE

PVT DATA (INCLUDES DENSITY AND COMPRESSIBILITY FACTOR)

476	487	2020	5118	5139	5595	5678	6064	6080	6084
6231	6258	6368	6421	6768	6840	7966	8732	8758	8762
9409	10836	11137	11238	12194	12725	13250	13537	13743	14990
16376	19187	19697	20649	21794	21853	22241	22243	23817	24336
25355	25559								

COMPRESSIBILITY

487	5118	5719	5879	6014	6768	7966	11238	14990	25355

EXPANSIVITY (INCLUDES COEFFICIENT OF THERMAL EXPANSION)

487	7966	25355

VAPOR PRESSURE

444	449	454	645	2020	2040	5677	6085	6368	6378
9409	11134	11247	11250	12751	13537	13983	14954	14955	14956
14957	14958	14990	15009	15024	16232	16332	16376	16868	18126
19187	22243	22602	25355						

MELTING LINE DATA

421	475	5118	5449	5595	6080	6368	6421	13735	14130
16376	18567	23062							

TRIPLE POINT

449	454	2040	5595	5677	6080	6378	6421	8325	12751
13537	14130	14956	14990	15024	16332	16376	19187	22243	25355

BOILING POINT

2040	5677	6378	9624	11247	12751	14956	14990	16332	16376
19187	22243								

CRITICAL POINT

449	5677	6084	9624	10836	11134	13537	14990	15024	16332
19187	21016	21134	22243						

SOLID TRANSITION POINTS

NONE

PHASE DIAGRAM

NONE

LATENT HEAT (INCLUDES HEATS OF FUSION, SUBLIMATION AND VAPORIZATION)

645	2020	5595	5928	6136	6368	6378	6421	9409	9624
12751	14956	14990	16232	16376	16868	19187	22428		

DEUTERIUM (CONT.)

HEAT CAPACITY

204	275	645	657	949	1860	2020	2040	5095	5119
5595	5709	5825	6136	6265	6368	6378	6416	6421	6838
7843	7966	8370	9409	11271	12197	12356	13537	13759	14990
16163	16232	17624	18026	21016	21750	21794	21853	22677	22899
23267	23394	24326	25355	25559					

ENTHALPY

949	950	2020	6368	6838	7966	9409	11271	16163	21750
21794	21853								

ENTROPY

275	645	657	949	2020	2040	6368	6838	7966	8370
9409	11271	13537	16163	21016	21750	21794	21853	22677	25355

VELOCITY OF SOUND

1860	5709	5813	6838	7839	7843	14990	21794	21853	25355
25559									

THERMAL CONDUCTIVITY

756	2020	5095	5825	9409	10731	12489	14990	15484	16502
17393	17454	20641	25237	25355					

VISCOSITY

546	962	2020	3948	5095	5132	5136	5137	5706	5825
6064	6131	6274	6344	6372	8330	8758	9409	10731	11036
11806	11832	11899	13113	13270	14990	15484	17393	19280	21757
22249	22496	23173	24326						

EQUATIONS OF STATE (INCLUDES VIRIAL COEFFICIENTS)

565	1860	5118	5139	6230	6231	6258	6378	6959	8399
8732	8760	8762	8776	9481	9533	9545	10836	10846	11574
11899	12424	12617	12621	12725	19697	20649	21794	23817	25355

JOULE-THOMSON EFFECT

424	464	949	950	6838	10846	13759	14232	18026	21794
21853	22237								

SURFACE TENSION

2020	9409	10893	13537	16834	19704	22219	23183	25058

NEON

PVT DATA (INCLUDES DENSITY AND COMPRESSIBILITY FACTOR)

143	203	690	737	800	801	991	1288	2135	3498
4900	5424	5542	5564	5567	5572	5738	6080	6091	6193
6326	6328	6333	6342	6432	6565	6581	6649	6703	6713
6718	6926	7017	7306	7355	7935	8703	9249	10401	10677
11005	11238	11280	11960	12018	12704	12895	13336	13413	13465
13467	13739	13761	15255	15653	16304	16404	16889	17015	17960
17965	18172	18493	19168	19187	19709	20647	20963	21824	22666
22898	23185								

COMPRESSIBILITY

800	5719	6091	6338	6765	7355	11238	23185	25082

EXPANSIVITY (INCLUDES COEFFICIENT OF THERMAL EXPANSION)

800	6193	6765	7306	7355	12386	12919	13465	19168	22666
23185									

VAPOR PRESSURE

143	428	799	3405	5513	5564	5575	5798	6212	6326
6336	6338	7396	8699	8991	9249	11318	11573	11653	11990
12018	12204	13161	13398	13466	13467	14329	14718	14959	16219
16340	17015	17993	18126	18166	18172	18491	18493	18705	19121
19694	21408	22602	23185	24274	25057				

MELTING LINE DATA

475	490	5915	6080	6184	6225	9249	10912	11451	12018
12204	12295	13161	14423	14621	14989	16285	16364	16404	17718
18493	18567	19448	23062	23185					

TRIPLE POINT

143	4612	5564	6080	6326	6573	8699	9249	11573	15024
17015	18166	18491	19187	21824	23185				

BOILING POINT

143	6184	6326	6334	8699	12204	13161	14423	17993	19187
20893	23185	23830							

CRITICAL POINT

737	940	5537	5542	5564	5567	5572	5808	6049	6326
6342	6649	6703	6852	8699	9249	10373	11573	12204	15024
16331	16375	16404	17015	17625	18042	18493	19187	21134	22697
23185	25062								

SOLID TRANSITION POINTS

NONE

PHASE DIAGRAM

10912

LATENT HEAT (INCLUDES HEATS OF FUSION, SUBLIMATION AND VAPORIZATION)

5564	5572	5797	5928	6184	6337	6338	6341	6573	7396
9249	10848	11335	12018	12204	12295	13398	13467	16404	19187
20647	21824	24313							

NEON (CONT.)

HEAT CAPACITY

204 224 375 799 3867 5509 5572 6225 6266 6573
7396 7827 9249 10882 11451 12018 12295 12919 13824 16317
16404 17166 17969 18026 18166 18493 19709 22666 23185 23558
24326

ENTHALPY

3867 6287 8919 10882 12018 12704 17015 17166 18345

ENTROPY

198 224 3867 7396 8919 10882 11349 11921 12295 12704
16375 17015 17166 18166 19709 22898 23558 25062

VELOCITY OF SOUND

5509 5572 6175 7827 7839 9249 12704

THERMAL CONDUCTIVITY

138 592 617 714 750 857 3479 5085 5095 5501
5504 5520 5572 5699 5700 5911 6332 6738 8313 8700
9249 9697 10461 10548 10593 10731 11042 11847 12018 12895
13647 14418 14622 15484 15634 16000 16152 16296 16303 16317
16404 16502 17175 17393 17558 17969 17994 18001 20390 20431
20975 22812 22999 23185 23311 24312 25237 25293

VISCOSITY

207 374 588 615 903 940 962 3284 5085 5094
5095 5706 5745 5749 5807 5908 6131 6331 6339 6340
6344 6738 8645 8700 9249 10731 10749 10750 10753 11036
11487 11832 12018 13113 13270 13647 14900 15376 15484 15653
16152 16296 16302 16317 16889 17175 17393 17558 18000 18015
19280 19286 19617 19990 20390 20975 21002 21305 22497 22999
23310 24287 24311 24312 24313 24326 24542 25237 25293

EQUATIONS OF STATE (INCLUDES VIRIAL COEFFICIENTS)

143 457 801 991 2135 5424 5542 5808 5967 6229
6326 6328 6334 6338 6586 6703 6718 6852 6926 6927
6929 6959 7466 7827 7935 8107 8331 8645 8700 8919
9249 10677 10750 11005 11280 11960 14621 14622 14766 16832
17015 17960 17965 18705 18839 18852 19709 21696 22999 24946
25061 25062

JOULE-THOMSON EFFECT

7935 8700 9249 10677 11457 15255 18026 22237

SURFACE TENSION

2135 5705 6394 10570 12018 12914 16834 19443 19704 20647
23186

ARGON

PVT DATA (INCLUDES DENSITY AND COMPRESSIBILITY FACTOR)

203	405	453	470	667	737	800	801	1092	1689
2058	2135	3498	3644	4900	5131	5542	5551	5555	5564
5567	5572	5579	5580	5646	5652	5665	5738	6064	6080
6103	6170	6183	6189	6193	6326	6328	6407	6497	6703
6718	6923	6924	6926	6928	6997	7145	7252	7459	7614
7657	7935	8644	8684	8703	8704	8758	9028	9076	9249
9295	9749	9978	10401	10610	10759	10841	10923	11005	11022
11238	11280	11281	11769	11843	11960	12018	12194	12227	12405
12616	12647	12662	12736	12895	13005	13250	13381	13413	13449
13465	13613	14539	14545	14555	14706	14794	14989	15022	15255
15355	15357	15425	15641	15653	15905	15942	15943	16094	16105
16108	16156	16242	16295	16304	16330	16368	16404	16872	16885
16887	16889	16891	16892	16894	16895	16902	17018	17160	17274
17960	17965	18004	18022	18128	18172	18333	18492	19187	19709
19895	19965	20250	20647	20963	21338	21824	22228	22243	22666
23185	23400	23589	24337	24346	25103	25268			

COMPRESSIBILITY

34	442	502	509	800	1174	2728	5707	5719	5756
6101	6198	6209	6338	6995	7099	7459	8297	9295	10746
11238	11281	12227	12647	13678	14795	15942	16295	17018	20296
21755	22666	23185	24114	24302	25082	25103			

EXPANSIVITY (INCLUDES COEFFICIENT OF THERMAL EXPANSION)

502	509	800	5652	6193	7099	9076	9295	9978	10746
11843	12018	12919	13465	14795	15942	15943	17018	18704	21052
21824	22228	22666	23185	25103	25326				

VAPOR PRESSURE

453	483	2068	3405	5564	5616	5806	5980	6083	6170
6212	6326	6338	6349	6497	7396	8906	8991	9249	9580
11281	11318	11573	11575	11653	11990	12018	12204	12373	12662
12895	13161	13466	13468	13820	13843	13844	13912	14229	14331
14718	16067	16214	17274	17993	18126	18172	18492	18748	18847
18848	18918	19287	20034	20370	21408	22602	23185	23400	23478
25057	25590								

MELTING LINE DATA

810	1999	5087	5088	5915	6080	6184	6300	6997	9249
9295	11281	11451	11452	12018	12200	12204	13161	13404	13613
13678	13778	14423	14621	14989	16234	16320	16364	16404	16871
17718	18492	18567	18840	18847	19448	20038	20370	21805	22426
23185	23385	23794	25103						

TRIPLE POINT

1999	3684	5564	6080	6083	6326	6573	9249	11573	12200
12662	13820	13844	15024	19187	20370	21824	22243	23185	24499

BOILING POINT

1179	5643	6083	6184	6326	6334	12204	13161	14423	16320
17993	18045	18847	19187	20370	20893	22243	23185	23830	24499

ARGON (CONT.)

CRITICAL POINT

562	737	940	5542	5564	5567	5572	5808	6049	6083
6105	6326	6703	6852	8684	9249	9501	10373	11573	12204
13820	14705	14794	15024	16320	16368	16375	16404	16819	17625
18042	18161	18492	18847	19187	19414	19801	21134	22243	22697
23185	23829	25062							

SOLID TRANSITION POINTS

NONE

PHASE DIAGRAM

13110 23385

LATENT HEAT (INCLUDES HEATS OF FUSION, SUBLIMATION AND VAPORIZATION)

5491	5564	5572	5885	5928	6184	6297	6300	6337	6338.
6573	6849	6997	7396	8398	9249	10848	12018	12204	12405
12662	13380	13778	13820	13843	13912	16214	16295	16361	16404
18672	18846	19187	19287	20647	21824	23174	24313	25312	

HEAT CAPACITY

204	224	375	453	833	1860	3867	4591	5170	5281
5527	5572	5579	5707	5756	5887	5998	6099	6104	6105
6183	6198	6217	6221	6253	6257	6300	6362	6533	6573
7099	7127	7396	7604	8383	8673	8698	9249	9295	9501
9978	10746	10872	10882	11022	11281	11283	11451	11452	12018
12568	12662	12919	13250	13380	13381	13468	13696	13824	13843
15740	15905	15942	16214	16317	16404	16698	16899	17018	17166
17228	17274	17838	17969	18026	18072	18128	18332	18333	18492
18837	18838	19187	19188	19287	19301	19709	19774	20550	21210
21824	22666	23185	23558	24066	24302	24317	24368	24776	

ENTHALPY

453	833	5579	6183	6257	6497	7604	10882	11281	11283
11921	12079	13250	15355	15740	16842	16899	17166	18128	23400
23595	25312								

ENTROPY

224	453	833	1179	3867	5579	6170	6183	6257	6297
6497	7396	7604	8763	10882	11281	11283	11452	11921	12079
12647	12662	13250	13449	14705	15355	15357	15740	16375	16899
17166	17274	17961	18128	19709	23558	23595	24066	25062	

VELOCITY OF SOUND

34	453	652	655	1106	1860	4591	5572	5579	5707
5756	5759	5813	6103	6104	6161	6175	6198	6992	7127
7789	9249	9501	9978	10746	10923	11022	11281	11710	12256
12643	12704	13250	14198	15021	17018	17274	18333	18598	18851
19306	19774	19909	20250	21281	22052	24302			

ARGON (CONT.)

THERMAL CONDUCTIVITY

434	453	592	617	628	654	676	695	724	749
750	757	821	857	999	3479	5085	5088	5095	5124
5501	5504	5505	5520	5555	5572	5573	5686	5910	5911
5912	5959	6031	6068	6070	6071	6100	6106	6164	6174
6186	6217	6323	6332	6497	6738	6746	7052	8024	8313
8692	8700	9249	9295	9580	9697	10461	10548	10593	10731
10746	10803	10844	10914	11461	11805	11847	12018	12895	12925
12977	13633	13647	13980	14418	14480	15144	15484	15634	15738
15905	16000	16152	16296	16303	16317	16404	16502	16878	16879
16880	16886	16897	17175	17454	17558	17968	17969	17994	18001
18128	18303	18490	18842	18843	19176	19179	19188	19325	19480
19659	19904	20390	20431	20553	20975	21338	22714	22812	22828
22829	22999	23185	23500	24312	24368	25060	25237	25293	

VISCOSITY

374	453	570	530	544	588	615	791	903	940
999	1106	3284	3896	5085	5087	5088	5094	5095	5124
5507	5555	5573	5643	5706	5745	5749	5807	5959	6061
6064	6154	6164	6321	6339	6340	6360	6385	6386	6391
6497	6738	7052	8024	8645	8700	8758	9149	9249	9607
10610	10725	10731	10747	10749	10750	10751	10753	10759	11036
11487	11832	12018	12078	12631	12977	13633	13647	14014	14480
14978	15024	15376	15484	15653	15738	15838	15904	15905	16152
16296	16302	16317	16884	16888	16889	17160	17175	17538	17558
17730	17961	17962	17964	17998	17999	18000	18015	18055	18128
18841	18994	19175	19187	19188	19286	19479	19617	19659	20010
20390	20975	21002	21053	21305	22243	22497	22675	22828	22999
23031	23310	23397	23503	23589	23617	23824	24287	24311	24312
24313	24346	24542	24775	25055	25237	25293			

EQUATIONS OF STATE (INCLUDES VIRIAL COEFFICIENTS)

442	453	652	688	801	1092	1860	2135	5542	5551
5580	5759	5808	5967	6101	6103	6189	6194	6229	6326
6328	6338	6586	6703	6718	6852	6926	6927	6928	6929
6959	6995	7099	7252	7614	7657	7763	7935	8107	8297
8331	8383	8398	8644	8645	8684	8685	8700	8763	9028
9249	10750	10759	10846	10923	11005	11280	11960	12287	12662
13250	13613	13982	14621	14766	15024	15943	16067	16094	16156
16832	16871	16891	17274	17960	17961	17965	18161	18492	18672
18839	18852	19445	19446	19709	19801	19895	19965	20296	20495
21052	21696	22666	22999	23001	23187	23595	24114	24302	24317
24337	24948	25061	25062	25103	25268	25365	25615		

JOULE-THOMSON EFFECT

464	567	5579	6183	7604	7935	8700	9249	10846	10923
11237	13250	14232	15255	16870	18026				

SURFACE TENSION

536	992	2135	5899	6402	8398	10570	11957	11961	12018
12914	16295	16834	17160	18845	19189	19443	19704	20296	20647
22243	23186	23589	23596	24346	24780	25262			

NITROGEN

PVT DATA (INCLUDES DENSITY AND COMPRESSIBILITY FACTOR)

67	203	218	293	318	370	405	447	453	469
566	605	634	700	737	738	801	924	983	1092
1116	1130	1689	2020	2135	3525	3754	4900	5120	5122
5123	5215	5424	5542	5547	5550	5555	5646	5665	5725
5728	5738	5897	5938	6023	6051	6064	6069	6095	6125
6170	6248	6318	6326	6328	6330	6346	6352	6389	6497
6615	6630	6644	6718	6721	6772	6815	6912	6914	6920
6926	6928	6988	6997	7010	7146	7147	7252	7324	7568
7611	7628	7681	7852	7889	7935	8044	8644	8679	8682
8683	8703	8707	8716	8717	8758	8774	9409	9507	9735
9737	9978	10401	10647	10672	10677	10742	10748	10759	10839
10841	10873	10923	11002	11005	11022	11238	11280	11624	11995
12018	12034	12194	12258	12267	12298	12405	12501	12502	12647
12698	12704	12781	12828	12829	12895	13377	13413	13438	13781
14127	14274	14423	14539	14540	14794	14796	14962	14989	14990
15022	15255	15536	15550	15641	15652	15653	15710	16108	16109
16156	16835	16836	16876	16883	16895	17018	17960	17965	18021
18046	18132	18167	18169	18181	18492	18512	19119	19184	19709
19711	20250	20267	20642	20647	20963	20974	21132	21338	21414
21824	22666	22928	23065	23387	23393	23400	23552	23598	23627
24322	24328	24414	25268						

COMPRESSIBILITY

34	442	650	680	1174	2728	3754	5719	5756	6092
6198	6330	6765	6988	6995	7297	7474	8044	8207	8208
10746	11238	11613	12647	12820	13610	13845	14990	17018	18182
20296	20896	22666	23419	23552	24302	24583			

EXPANSIVITY (INCLUDES COEFFICIENT OF THERMAL EXPANSION)

447	3754	5215	6765	7297	7324	7460	8717	9978	10746
16120	17018	20896	22666	24583					

VAPOR PRESSURE

230	293	408	453	483	513	634	700	2020	2928
3405	5099	5480	5516	5529	5616	5980	6170	6243	6289
6293	6326	6497	6630	6721	6759	7396	8699	8711	9409
10196	10763	11249	11318	11803	12018	12166	12204	12267	12298
12828	12895	13161	13382	13384	13463	13468	13924	14072	14127
14329	14331	14619	14680	14718	14990	16067	16109	16358	17993
18126	18181	18492	18505	18509	18582	19184	19694	21051	21408
22602	22665	22687	23400	23552	24274	24325	24328	24822	25590

MELTING LINE DATA

447	475	490	638	1999	2169	5525	5915	6293	6300
6398	6997	8793	10843	10912	11114	12018	12034	12204	12267
13161	13778	13831	14423	14621	14962	14989	16287	16358	16364
18180	18492	18567	19448	20038	20974	23385			

NITROGEN (CONT.)

TRIPLE POINT

513 1999 2928 5516 5564 6326 6630 8699 10196 10763
10843 14990 15024 16700 18505 18509 21824

BOILING POINT

230 513 1617 2169 2928 5516 5643 6240 6293 6326
6334 6630 8699 11051 11114 12034 12204 13161 14072 14423
14990 16358 16695 17993 18045 18509 19185 22935 24499

CRITICAL POINT

513 562 700 737 940 5542 5564 5576 5808 6023
6049 6105 6326 6424 6630 6721 6852 8044 8699 9501
11051 12034 12166 12204 14423 14794 14796 14990 15024 16375
16819 17336 17625 18042 18181 18492 19414 20036 20135 21134
22697

SOLID TRANSITION POINTS

605 5525 6293 6398 7059 13468 14990 15641 15643 16109
18180 18454 22450 23552 24240

PHASE DIAGRAM

605 5897 7059 10912 13110 14423 23385

LATENT HEAT (INCLUDES HEATS OF FUSION, SUBLIMATION AND VAPORIZATION)

230 513 985 2020 4225 5550 5733 5928 6293 6297
6300 6313 6337 6398 6424 6849 6997 7059 7144 7396
9409 10843 10848 11335 12018 12034 12204 12267 12405 12828
13377 13378 13380 13778 13803 13831 13849 14423 14619 14990
16093 16101 16109 16358 16361 16594 16845 18505 19728 20647
21051 21824 23174 23552 24313 24328 25312

HEAT CAPACITY

204 224 275 453 469 485 626 633 640 700
721 738 840 842 983 998 1116 1238 3867 5093
5095 5432 5493 5536 5550 5600 5718 5726 5733 5756
5921 6011 6046 6062 6104 6105 6109 6114 6177 6198
6217 6221 6223 6253 6257 6265 6266 6282 6293 6294
6300 6318 6326 6363 6393 6398 6630 6659 6841 7010
7059 7127 7392 7396 7747 7896 8109 8110 8111 8112
8131 8389 8673 8696 8698 8706 8710 9501 9978 10742
10746 10748 10752 10872 10873 10880 10882 11021 11022 11023
11283 12018 12298 12503 13380 13438 13468 13831 14127 14530
14990 15642 15739 16109 16317 16760 16845 16869 16877 17018
17166 18026 18332 18492 18706 18838 19709 19728 19774 20550
20909 21051 21132 22666 22805 22833 23552 23627 24298 24302
24314 24315 24316 24318 24323 24332 24583

NITROGEN (CONT.)

ENTHALPY

453	469	520	553	658	738	840	842	983	998
2020	3544	3867	5493	5550	5921	6051	6063	6069	6109
6257	6277	6393	6497	6630	6659	9409	9611	10742	10882
10907	11021	11041	11102	11283	11921	12018	12079	12298	12501
12502	12637	12638	12781	12828	13377	13438	13802	14127	14274
14400	14423	15739	16694	16841	16845	16846	17166	18086	19636
19728	21051	23400	23595	23791	24314	24467	24825	24861	25312

ENTROPY

224	275	453	469	508	513	520	553	658	738
840	842	983	2020	3867	5550	5897	6051	6063	6069
6095	6109	6163	6170	6223	6257	6277	6281	6289	6293
6297	6497	6630	6659	7059	7396	8130	8389	9409	9611
10742	10882	10907	11041	11102	11283	11921	12079	12298	12647
12781	13438	13802	14127	14274	15642	15739	16375	16694	16845
16846	17166	19709	23595	24298	24583				

VELOCITY OF SOUND

34	453	652	655	678	680	721	738	1106	3106
5600	5756	5759	6092	6104	6161	6177	6198	6363	6424
6630	6841	6936	6992	7062	7127	7128	7392	7747	7841
7896	7916	8109	8110	8111	8112	8131	8359	8396	8695
9501	9978	10682	10746	10923	11022	11710	12704	13099	13889
14962	14990	15021	16877	17018	18598	18851	19289	19306	19774
19909	20250	20252	20909	22052	22234	22235	23552	23627	24302
24318									

THERMAL CONDUCTIVITY

89	441	453	592	604	617	628	654	666	676
695	704	759	821	926	927	999	1370	5093	5095
5124	5405	5432	5505	5555	5573	5889	5893	5914	5959
5988	6011	6027	6031	6068	6070	6071	6106	6127	6151
6164	6172	6217	6275	6318	6323	6497	6630	6738	6746
7010	7052	8024	8093	8312	8313	8693	10548	10658	10731
10746	10748	10799	10803	10840	10844	10880	10914	11007	11021
11023	11042	11052	11374	11461	11669	11805	11995	12018	12895
12977	13702	14418	14423	14443	14480	14622	14733	14990	15144
15484	15651	16000	16296	16317	16502	16898	17454	17994	18182
18303	18490	18842	19188	19480	19659	19904	20431	21338	22714
22828	22895	22999	23552	23787	24312	24324	24652	25060	25177
25293									

NITROGEN (CONT.)

VISCOSITY

207 374 441 450 453 530 604 615 618 700
940 999 1106 3284 5093 5095 5124 5394 5432 5507
5555 5573 5600 5643 5669 5703 5706 5711 5736 5807
5888 5896 5896 5959 6011 6061 6064 6067 6110 6151
6154 6164 6263 6269 6272 6275 6318 6321 6334 6360
6385 6405 6497 6630 6738 7010 7052 7105 8024 8645
8700 8701 8758 9250 9607 10436 10579 10658 10669 10731
10747 10748 10749 10750 10751 10753 10759 10782 10840 10880
11021 11023 11103 11487 11832 11995 12018 12078 12166 12631
12698 12977 14423 14480 14622 14978 14990 15024 15087 15376
15484 15653 16296 16301 16317 16575 17538 17730 17999 18107
18841 18917 19175 19188 19286 19297 19617 19659 20010 21002
21053 21305 22243 22828 22999 23552 23617 24287 24311 24312
24313 24319 24322 24324 24330 24331 24775 25000 25055 25177
25293

EQUATIONS OF STATE (INCLUDES VIRIAL COEFFICIENTS)

67 225 293 442 453 459 634 640 650 652
660 669 721 801 1092 2135 3276 5424 5542 5725
5808 5938 6177 6194 6229 6230 6248 6254 6326 6328
6334 6374 6424 6718 6733 6772 6852 6926 6927 6928
6929 6959 6995 7252 7324 7392 7466 7611 7628 7681
7852 7935 8044 8107 8331 8399 8644 8645 8683 8685
8702 8707 9507 9610 9716 9735 9737 10647 10677 10750
10759 10846 10875 10923 11005 11280 12298 12420 12637 12781
12829 12855 13330 13377 13463 14127 14142 14540 14621 14622
14766 14962 15024 15356 16067 16109 16156 16832 16846 17336
17960 17965 18021 18492 18512 18706 18839 18917 19445 19709
20267 20296 20642 21051 21132 22666 22999 23187 23387 23390
23595 23674 23791 24298 24302 24327 24744 24946 24948 25268

JOULE-THOMSON EFFECT

332 464 469 567 3276 5897 6424 7935 10677 10846
10923 14232 15255 15648 16869 18026 18526 20817

SURFACE TENSION

536 2135 6394 6400 6405 10570 11957 11961 12018 12914
16834 18182 19189 19443 19704 20296 20647 22243 23186 23596

OXYGEN

PVT DATA (INCLUDES DENSITY AND COMPRESSIBILITY FACTOR)

67	203	218	293	405	453	488	636	700	737
787	1130	2020	2135	2161	2208	3498	4183	4511	4588
4900	5215	5363	5424	5542	5546	5550	5646	5938	6023
6064	6069	6125	6160	6273	6318	6326	6352	6389	6424
6497	6615	6644	6718	6781	6805	6814	6853	6854	6912
6917	6926	6928	6988	7026	7146	7148	7299	7324	7362
7611	7681	7935	8648	8679	8687	8703	8716	8774	9005
9409	9749	10401	10402	10647	10672	10677	10742	10748	10759
10841	10923	11002	11003	11005	11015	11280	11582	11624	11769
11798	11995	12018	12034	12194	12258	12381	12405	12727	12802
12827	12828	12840	12854	12895	13125	13247	13344	13345	13377
13413	13482	13546	13781	13923	14331	14545	14794	14990	15022
15255	15268	15490	16156	16357	16883	17018	17160	18167	19184
19278	19703	20248	20642	20645	20646	20651	20963	21338	21824
22666	23393	23400	23501	24328	24346	25268			

COMPRESSIBILITY

34	442	680	4588	5756	6792	6811	6854	6917	6988
7034	10389	10746	14990	15490	17018	18182	20296	22666	24777
24782									

EXPANSIVITY (INCLUDES COEFFICIENT OF THERMAL EXPANSION)

4183	4588	5215	7324	10746	16120	17018	22666

VAPOR PRESSURE

293	453	455	483	700	787	3405	4183	4588	5099
5363	5397	5616	6047	6081	6167	6243	6326	6349	6403
6497	6620	7396	7791	8699	8711	8906	10196	10763	10790
11318	12018	12166	12204	12373	12802	12827	12828	12895	13161
13345	13379	13382	13384	13463	13466	13468	13783	14072	14329
14331	14619	14959	14990	15490	16067	16072	16075	16077	16100
16282	16425	16697	16699	16702	18003	18126	18171	18509	19185
19410	19694	20034	21408	22602	22830	23400	24274	24325	24328
24777	24782	25590							

MELTING LINE DATA

475	490	527	538	802	810	2020	2169	4588	5525
5915	6074	6300	6398	9409	10414	10912	11798	12018	12034
12204	13021	13161	13831	13923	14619	14960	16331	16425	18180
18515	18516	18567							

TRIPLE POINT

4588	5564	6326	8699	10196	10763	10958	11798	12802	12827
14990	15024	16700	18509	21824	22938	24506			

BOILING POINT

1617	2169	2819	5643	6326	6327	6403	7622	8699	9005
9014	9076	11001	11051	11114	12034	12204	12506	12827	12837
13021	13161	13379	13783	13923	14072	14248	14959	14990	16075
16077	16282	16695	16697	16701	18045	18509	18516	19185	22935
22936	24390	24498	24499						

OXYGEN (CONT.)

CRITICAL POINT

542 562 700 737 940 1133 4588 5542 5564 5576
5808 6023 6049 6081 6105 6326 6424 6852 7791 8699
9501 11000 11051 11508 11582 12034 12166 12204 14794 14990
15024 16375 16819 17625 18042 19185 19414 20135 20898 21134
22697

SOLID TRANSITION POINTS

482 527 802 4588 5525 6074 6173 6398 10389 12827
13468 14990 15643 18180 18454 18515 22450 22938 23260 24243
24506

PHASE DIAGRAM

482 10912 13110

LATENT HEAT (INCLUDES HEATS OF FUSION, SUBLIMATION AND VAPORIZATION)

184 527 985 2020 2208 4225 4588 5491 5550 5733
5985 6297 6300 6313 6326 6337 6398 6424 7396 8651
9025 9409 10411 10848 11582 12018 12034 12204 12263 12405
12802 12827 12828 13021 13377 13378 13380 13803 13831 13849
13923 13978 14619 14990 15490 16093 16361 16694 16845 19708
21824 24313 24328 24777 24782 25312

HEAT CAPACITY

204 224 275 446 453 455 485 527 626 633
700 790 802 844 846 998 1238 2114 3142 3272
3801 3867 4183 4588 4591 4902 5095 5490 5493 5550
5718 5726 5733 5756 5921 6011 6046 6062 6105 6168
6173 6217 6223 6253 6257 6265 6266 6282 6300 6318
6363 6390 6393 6398 6809 6841 6853 7248 7391 7396
7747 7827 7896 8282 8673 8680 8696 8698 8706 8710
9076 9486 9501 10742 10746 10748 10752 10880 10882 11021
11283 12018 12827 13021 13380 13468 13831 14990 15490 15739
15740 16317 16845 16877 17018 17166 18026 18838 19665 19666
20898 22666 22805 24298 24314 24315 24316 24318 24323 24332
24777 24782 25092

ENTHALPY

453 520 553 658 790 844 846 998 2208 3867
4588 5493 5514 5550 5921 6069 6257 6393 6497 10371
10742 10882 10958 11021 11041 11102 11283 12018 12079 12638
12802 12828 12837 13377 15739 15740 16694 16841 16845 16846
17166 20651 23400 24314 24467 24782 25312

ENTROPY

224 275 453 520 527 553 658 790 844 846
3867 4588 5550 6069 6163 6223 6257 6297 6497 7396
8680 10742 10882 11041 11102 11283 11921 12079 12802 12827
15739 15740 16375 16694 16845 16846 17166 20384 20651 24298
25092

OXYGEN (CONT.)

VELOCITY OF SOUND

34	453	680	682	988	1106	3106	3801	4183	4588
4591	4902	5756	5759	6161	6201	6363	6424	6811	6841
6853	6992	7128	7391	7476	7653	7747	7807	7827	7841
7896	8282	8695	9501	10746	10923	12704	13099	13296	13889
14990	16877	17018	18851	19205	19289	20252	22052	24318	24777
24782									

THERMAL CONDUCTIVITY

406	446	453	604	617	695	717	724	760	784
999	3479	4588	5095	5494	5505	5524	5573	5701	5889
5911	5959	5988	6011	6027	6068	6071	6106	6151	6164
6169	6174	6217	6270	6271	6275	6318	6323	6497	6738
6746	7052	8024	8313	8693	10461	10548	10658	10731	10746
10748	10799	10844	10880	10914	11007	11010	11021	11540	11582
11995	12018	12895	12977	14418	14480	14622	14733	14990	15484
15490	15651	16296	16317	17994	18182	18490	18843	19179	20431
21338	22828	22895	24312	24777	24782	25177	25237	25293	

VISCOSITY

374	446	450	453	538	604	615	700	940	999
1106	3284	4588	5094	5095	5573	5643	5703	5706	5711
5736	5807	5959	6011	6061	6064	6110	6151	6164	6263
6269	6272	6275	6318	6321	6384	6386	6391	6497	6738
7052	7299	8024	8645	8700	8701	9250	10436	10579	10658
10673	10731	10747	10748	10749	10750	10751	10753	10759	10782
10880	11021	11479	11487	11582	11832	11995	11995	12018	12078
12166	12977	13824	14480	14978	14990	15087	15484	15490	15838
16296	16317	17160	17538	17999	19286	19617	20010	20389	21305
22828	23617	24311	24312	24313	24346	24777	24782	25177	25293

EQUATIONS OF STATE (INCLUDES VIRIAL COEFFICIENTS)

67	225	293	442	453	457	488	542	669	2135
3276	3801	4588	5424	5514	5542	5759	5808	5938	6229
6326	6424	6586	6718	6805	6852	6853	6854	6926	6927
6928	6929	6959	7148	7324	7391	7611	7681	7827	7935
8107	8331	8645	8702	10647	10677	10750	10759	10923	10989
11005	11280	12246	12420	12802	12827	12855	12855	13377	13463
14622	14766	16067	16156	16846	18839	19703	20296	20642	20651
22666	24298	24946	25268						

JOULE-THOMSON EFFECT

3276	4588	5603	7935	10677	10923	14232	15255	18026	18526

SURFACE TENSION

536	538	2135	4588	6394	6400	7299	11618	11961	12018
12914	13824	15490	17160	18182	19443	20296	23186	23596	24346
24777	24780	24782							

CARBON DIOXIDE

PVT DATA (INCLUDES DENSITY AND COMPRESSIBILITY FACTOR)

370	484	545	619	700	775	3253	5434	5548	5569
5728	5738	6109	6170	6193	6273	6318	6497	6926	6988
7611	7657	7681	7935	8044	8676	8682	8688	8717	8718
8719	8732	8758	9736	10296	10647	10735	10748	10759	11005
11026	11114	11280	11820	12405	12790	12895	13479	14249	14331
14534	14674	14691	15644	15645	16308	16883	17767	18719	18978
18979	20267	20642	20645	20646	20974	21132	21338	22481	23387
24299	25268								

COMPRESSIBILITY

442	6988	8044	8207	8676	13610	13845	20897	24302

EXPANSIVITY (INCLUDES COEFFICIENT OF THERMAL EXPANSION)

484	6157	6193	7460	8392	8717	11486

VAPOR PRESSURE

453	700	5016	5434	5674	5919	6043	6047	6167	6170
6497	6580	8718	10190	10202	10744	11318	11799	12204	12266
12895	13161	13463	14329	14331	14619	14718	16204	16697	16701
17211	18126	18582	18719	19410	19694	21408	22602	24274	25590

MELTING LINE DATA

490	2169	12204	12266	13161	14423	15487	18567	20974

TRIPLE POINT

462	3684	10958	12266	17211	24499

BOILING POINT

2169	5643	9076	12204	13161	13369	14423	16697	17211	18045
24499									

CRITICAL POINT

542	619	700	5255	6049	6105	8044	8718	12204	12786
13369	13479	16210	16211	16819	18042	22481	22697	23618	

SOLID TRANSITION POINTS

NONE

PHASE DIAGRAM

482

LATENT HEAT (INCLUDES HEATS OF FUSION, SUBLIMATION AND VAPORIZATION)

5434	5491	11799	12040	12204	12405	13848	14619	17211

HEAT CAPACITY

446	484	485	626	633	640	700	832	998	3142
5038	5093	5095	5432	5434	5493	5536	5571	5600	5718
5913	5921	5998	6011	6029	6041	6046	6062	6105	6114
6138	6221	6253	6265	6282	6318	6393	7127	7747	8698
8706	8710	9076	9483	9486	10296	10748	10752	10880	11023
11283	11799	11815	12428	12790	13479	14251	14674	15739	15740
16877	17166	17211	17969	18332	18837	18838	20643	21132	22251
22805	24302	24314	24315	24316	24318	24323	24332	24368	

CARBON DIOXIDE (CONT.)

ENTHALPY

484	520	553	658	832	998	3253	5493	5570	5921
6393	6497	9483	10296	10958	11041	11102	11283	11820	11921
12428	12790	13479	14249	14251	15650	15680	15739	15740	17166
18978	23595	24299	24314	25543					

ENTROPY

520	553	658	832	5570	6163	6170	6497	9826	10296
11041	11102	11283	11799	11820	11921	12428	12790	13479	14251
15739	15740	17166	17211	17961	18978	23595			

VELOCITY OF SOUND

1106	2274	5600	6093	6816	6936	7062	7127	7128	7314
7387	7747	7916	8695	12790	13296	13679	16877	19289	20252
24302	24318								

THERMAL CONDUCTIVITY

.46	592	628	654	714	724	999	5093	5095	5124
5432	5494	5505	5573	5889	5911	5914	5944	5959	6011
6027	6031	6068	6070	6106	6127	6151	6164	6169	6174
6275	6318	6323	6497	6619	6738	7010	7907	7989	8024
8312	8313	8692	9244	10296	10548	10731	10748	10880	11007
11023	11033	11042	11461	11669	11825	12790	12849	12895	12977
14418	14480	14674	14675	15645	16000	16298	16898	17454	17968
17969	17994	18303	18490	18843	18924	20431	21338	21955	24307
24368	25177	25237	25293	25362					

VISCOSITY

207	374	446	450	530	545	615	700	999	1106
3284	5093	5095	5124	5432	5573	5600	5643	5888	5959
6011	6061	6067	6110	6151	6164	6275	6318	6386	6391
6405	6497	6738	7010	7907	8024	8700	8758	10296	10731
10744	10747	10748	10749	10750	10759	10782	10880	11023	11033
11487	11832	12078	12578	12790	12977	14480	14622	15376	15645
16298	17538	17730	17961	17964	18000	18917	18995	19188	19617
20011	21955	23617	24307	24311	25177	25293			

EQUATIONS OF STATE (INCLUDES VIRIAL COEFFICIENTS)

442	457	542	631	640	660	3276	3541	5674	5875
5967	6093	6194	6580	6706	6733	6926	6927	6929	6959
7611	7657	7681	7935	8044	8107	8331	8685	8732	9716
10647	10735	10750	10759	10846	10875	11005	11026	11114	11280
12785	12855	13330	13463	14402	14534	14622	14766	15356	15644
16308	16832	17211	17663	17767	17961	18839	18917	18978	18979
19445	20267	20642	20897	21132	21583	23187	23387	23390	23446
23595	24299	24302	24327	25268					

JOULE-THOMSON EFFECT

464	567	3276	6109	7935	10846	13479	14232	15648	18526
20817									

SURFACE TENSION

3541	6405

METHANE

PVT DATA (INCLUDES DENSITY AND COMPRESSIBILITY FACTOR)

318	370	924	2135	3253	3844	5127	5128	5424	5502
5503	5534	5542	5665	5728	5730	6023	6064	6080	6087
6170	6318	6408	6703	6718	6926	6928	7681	7811	7935
8044	8667	8682	8703	8716	8717	8758	8793	9498	10647
10728	10748	10759	10841	10873	11005	11717	12018	12501	12502
12704	12781	12895	12895	13413	13438	13467	13800	13808	14111
14532	14535	14545	14706	15425	15652	15654	15826	16104	16123
16308	16876	17274	17443	17785	18181	18500	18513	18750	19294
19613	20267	20554	20642	20903	21133	21338	21433	22243	22666
22672	22979	23248	23387	24263	24308	25063	25268		

COMPRESSIBILITY

34	680	2728	5707	5756	6198	6971	8044	8208	8667
10389	10746	11613	22666	24308					

VAPOR PRESSURE

407	673	3660	3844	5397	5480	5482	5503	5518	5674
5679	5773	5919	6025	6040	6042	6043	6047	6087	6170
6406	8288	9984	10744	11249	12018	12204	12264	12895	13161
13467	13468	15106	15826	16075	16218	17274	17316	18168	18171
18181	18509	18582	18748	19410	19694	19721	20903	21051	21126
21403	22250	22602	22830	24274	24703	25590			

MELTING LINE DATA

523	810	1416	5087	5487	6080	6398	8793	12018	12204
13021	13161	14111	14620	16102	16231	18180	18516	18980	22426
25355									

TRIPLE POINT

407	1416	5487	5679	6028	6034	6080	8288	15024	15826
17679	18509	20903	22243	24499	25355				

BOILING POINT

3844	9984	11051	12204	13021	13161	14111	15826	18045	18509
18516	20893	20903	22243	24499					

CRITICAL POINT

542	562	694	940	2181	5502	5534	5542	5576	5730
5808	6023	6034	6040	6049	6072	6105	6409	6703	8044
8288	9501	9984	10194	11051	12204	13548	13680	13800	13958
15024	15826	16375	17336	18042	18181	19414	20036	20134	21126
21134	22243	22697	23618	24297					

METHANE (CONT.)

SOLID TRANSITION POINTS

712	1416	5685	6398	10389	13468	14077	14620	16231	17679
17774	18180	20181	20285	20903	25355				

PHASE DIAGRAM

712	5734	13680

LATENT HEAT (INCLUDES HEATS OF FUSION, SUBLIMATION AND VAPORIZATION)

1416	3660	3844	5487	5502	5534	5685	5885	6037	6038
6297	6398	9984	12018	12204	13021	13467	14111	14620	15826
16231	17679	18168	18980	20247	20903	21051	21954	24313	25355

HEAT CAPACITY

446	485	633	673	683	694	998	1416	2069	3272
3844	5093	5095	5257	5536	5600	5679	5685	5707	5718
5756	5998	6011	6029	6032	6036	6037	6040	6041	6046
6105	6143	6198	6217	6253	6265	6294	6318	6393	6398
7127	8710	9501	9984	10741	10746	10748	10873	10880	10913
12018	12503	13021	13438	13468	14077	14620	15632	15739	15740
15826	16123	16231	16317	16698	16877	17166	17274	17679	17969
18026	18168	18513	18837	18838	20247	20432	20554	20903	21051
22666	22833	23386	24314	24315	24323	24368	25355		

ENTHALPY

694	998	2181	3253	5128	5257	5386	6037	6087	6143
6197	6393	9498	11761	11921	12018	12501	12502	12781	12793
13047	13438	13958	14399	15650	15680	15739	15740	15826	16759
17166	18168	18605	20247	20268	20432	21051	24314	24861	

ENTROPY

694	1126	1416	3844	5128	5218	5685	6026	6037	6087
6143	6170	6297	7427	8122	8134	8365	9498	9984	11921
12781	13047	13438	15739	15740	15826	16375	16759	17166	17274
17679	20432	21954							

VELOCITY OF SOUND

34	652	680	1988	5600	5707	5756	6198	6705	7127
9501	10746	12704	13679	16877	17274	18851	19289	20252	20554
22052									

THERMAL CONDUCTIVITY

446	523	592	617	695	784	927	999	5093	5095
5504	5505	5889	6011	6027	6031	6068	6071	6151	6164
6217	6275	6318	6738	7052	8024	8313	10548	10731	10741
10746	10748	10844	10880	10913	11007	11669	11805	12018	12895
12895	14418	14480	14733	15484	15632	16317	17968	17969	17994
18490	18832	18842	18843	19325	19904	20431	21338	22999	24297
24312	24324	24368	24720	25060	25176	25177	25237	25293	

METHANE (CONT.)

VISCOSITY

207	446	450	588	615	940	999	2730	3284	5087
5093	5094	5095	5600	5669	5703	5736	5888	6011	6061
6064	6073	6110	6151	6164	6275	6318	6738	7052	8024
8700	8734	8758	9038	10579	10669	10728	10731	10744	10747
10748	10750	10751	10759	10782	10880	10913	11766	12018	12078
12578	14480	14622	14789	15024	15484	15838	15904	16317	16335
17538	17964	18841	19175	19286	19617	19969	20010	20389	21618
21757	22243	22999	23032	23173	23248	23617	24311	24312	24313
24324	24775	25177							

EQUATIONS OF STATE (INCLUDES VIRIAL COEFFICIENTS)

457	542	652	2135	4625	5386	5424	5542	5674	5808
5967	6194	6229	6374	6703	6718	6926	6927	6928	6929
6939	6940	6959	7681	7935	8044	8331	8399	8685	9716
10647	10750	10759	10846	10847	11005	12420	12781	12785	13544
14535	14622	14766	15024	15654	16104	16308	16832	17274	17336
17443	17618	18513	19294	19613	20267	20268	20373	20554	20642
21051	21133	21696	22666	22979	22999	23187	23387	24263	24946
24948	25063	25268	25330						

JOULE-THOMSON EFFECT

567	5218	7935	10194	10846	10847	13438	14232	18026	18095
18168	20895								

SURFACE TENSION

3844	12018	19189	22243	23186	23596

ETHANE

PVT DATA (INCLUDES DENSITY AND COMPRESSIBILITY FACTOR)

984	3253	3844	5128	5534	5614	6064	6080	6718	7605
7681	8044	8717	8793	10387	10748	10759	11717	11819	12501
12502	12895	13438	13467	14111	14545	15357	15536	15550	15849
15869	16308	16876	18750	19613	20267	21133	21694	22666	23248
24263	24308	25268							

COMPRESSIBILITY

2728	8044	8669	10387	21694	24302	24308

EXPANSIVITY (INCLUDES COEFFICIENT OF THERMAL EXPANSION)

5534	6040	7460	7605	8717	15357	22666

VAPOR PRESSURE

MELTING LINE DATA

TRIPLE POINT

6080	25534

BOILING POINT

3844	5605	11051	12204	13611	13884	14111	18516	25534

CRITICAL POINT

SOLID TRANSITION POINTS

NONE

PHASE DIAGRAM

13680

LATENT HEAT (INCLUDES HEATS OF FUSION, SUBLIMATION AND VAPORIZATION)

984	3660	3844	5491	5534	6037	6038	6297	11456	12204
13467	13611	14111	18980	24313	25534				

ETHANE (CONT.)

HEAT CAPACITY

673 694 984 3844 5095 5257 5497 5718 5998 6037
6040 6041 6099 6105 6109 6138 6265 7127 8710 10748
10880 10913 13438 15632 15740 16877 22666 22833 24302 24314
24368 25534

ENTHALPY

694 984 2181 3253 5128 5257 6037 6197 11761 11819
11921 12501 12502 13438 13491 14019 14399 15357 15650 15740
18605 20268 23595 24314 24825 25534

ENTROPY

508 694 984 3844 5128 5218 6037 6297 11819 11921
13438 15357 15740 23595 25534

VELOCITY OF SOUND

7127 13679 16877 24302

THERMAL CONDUCTIVITY

999 5095 5504 5535 6151 10548 10731 10748 10844 10880
10913 11805 12895 14418 14480 15484 15632 17968 18832 24368
24720 25177 25237

VISCOSITY

207 999 2730 5095 5669 5706 6064 6151 6263 6747
8734 9038 10731 10748 10750 10759 10782 10880 10913 12078
13676 14480 14622 15484 17964 19969 23032 23248 23617 24313
25177

EQUATIONS OF STATE (INCLUDES VIRIAL COEFFICIENTS)

542 5674 5875 5967 6229 6718 6929 6939 6940 7098
7681 8044 8669 9716 10750 10759 10846 12785 13544 14622
14766 15356 15357 16308 17618 19613 20267 20268 21133 23595
24263 24302 25268 25534

JOULE-THOMSON EFFECT

5218 10846 13438 19124

SURFACE TENSION

3844 11906

KRYPTON

PVT DATA (INCLUDES DENSITY AND COMPRESSIBILITY FACTOR)

2068	5572	5614	5738	6080	6170	7657	7935	8684	9249
10759	11843	11960	12616	12736	16304	16404	16872	16889	18131
18172	18493	21338	21824	22243	22666	22695	23185		

COMPRESSIBILITY

5719	6338	13678	23185	25082

EXPANSIVITY (INCLUDES COEFFICIENT OF THERMAL EXPANSION)

11843	12919	22666	22676	23185

VAPOR PRESSURE

2068	5016	5563	5806	6170	6212	6338	9249	11573	11816
12204	12568	12895	13161	14718	16699	18126	18172	18493	19373
22602	22695	23185	24849	25057					

MELTING LINE DATA

810	5915	6080	6184	9249	11451	12200	12204	13161	13404
13678	14423	14621	16102	16404	17718	18493	18567	22426	23185

TRIPLE POINT

6080	6573	9249	11573	12200	12568	15024	21824	22243	22695
23185	24499								

BOILING POINT

6184	12204	13161	14423	18045	19373	20893	22243	22695	23185
23830	24499								

CRITICAL POINT

5572	6049	8684	9249	10373	11573	12204	15024	16404	17625
18042	18493	21134	22243	22697	23185	25062			

SOLID TRANSITION POINTS

NONE

PHASE DIAGRAM

NONE

LATENT HEAT (INCLUDES HEATS OF FUSION, SUBLIMATION AND VAPORIZATION)

5572	6184	6297	6338	6573	9249	12204	12568	16404	19700
21824	22695	24849							

KRYPTON (CONT.)

HEAT CAPACITY

204 3867 5572 6217 6362 6533 6573 9249 10882 11451
12568 12919 16404 16698 18493 19774 22666 22695 23185 23558
24368

ENTHALPY

3867 10882 11679 16842 18140

ENTROPY

3867 6170 6297 10882 11679 23558 25062

VELOCITY OF SOUND

5572 6175 9249 19774

THERMAL CONDUCTIVITY

750 5085 5095 5501 5520 5572 6217 6332 6738 9249
10548 10593 10731 10844 11847 13647 13647 16152 16303 16404
17175 18490 19325 19700 20390 20431 20975 21338 22812 22828
22999 23185 24368 24542 25237

VISCOSITY

588 5085 5095 5749 6340 6738 9249 10731 10753 10759
11679 13647 13647 14014 15838 15904 16152 16152 16302
16889 17175 18000 18015 19286 19700 20390 20975 21305 22828
22999 23310 24311

EQUATIONS OF STATE (INCLUDES VIRIAL COEFFICIENTS)

5967 6338 7657 7935 8107 8684 9249 10759 11679 11960
13982 14621 14766 18131 18852 19445 19700 21696 22999 23187
24946 25061 25062

JOULE-THOMSON EFFECT

7935 9249

SURFACE TENSION

NONE

REFRIGERANT 13

PVT DATA (INCLUDES DENSITY AND COMPRESSIBILITY FACTOR)
7252 8025 8682 20007

COMPRESSIBILITY
NONE

EXPANSIVITY (INCLUDES COEFFICIENT OF THERMAL EXPANSION)
NONE

VAPOR PRESSURE
8025 12204 23212

MELTING LINE DATA
12204 13884 18488

TRIPLE POINT
NONE

BOILING POINT
12204 13884

CRITICAL POINT
12204 13884 23618

SOLID TRANSITION POINTS
NONE

PHASE DIAGRAM
NONE

LATENT HEAT (INCLUDES HEATS OF FUSION, SUBLIMATION AND VAPORIZATION)
5491 12204 14428 18488

REFRIGERANT 13 (CONT.)

HEAT CAPACITY
5536 8025 18488

ENTHALPY
11921

ENTROPY
11921

VELOCITY OF SOUND
NONE

THERMAL CONDUCTIVITY
14428 15280 15484

VISCOSITY
15484 16299 16301

EQUATIONS OF STATE (INCLUDES VIRIAL COEFFICIENTS)
7252 20007

JOULE-THOMSON EFFECT
NONE

SURFACE TENSION
NONE

REFRIGERANT 14

PVT DATA (INCLUDES DENSITY AND COMPRESSIBILITY FACTOR)
8394 10387 10388 10759 17443 20007 24308

COMPRESSIBILITY
10387 10388 24308

EXPANSIVITY (INCLUDES COEFFICIENT OF THERMAL EXPANSION)
NONE

VAPOR PRESSURE
12204

MELTING LINE DATA
12204 13884 18180

TRIPLE POINT
NONE

BOILING POINT
12204 13884

CRITICAL POINT
8394 12204 13884

SOLID TRANSITION POINTS
NONE

PHASE DIAGRAM
NONE

LATENT HEAT (INCLUDES HEATS OF FUSION, SUBLIMATION AND VAPORIZATION)
12204

REFRIGERANT 14 (CONT.)

HEAT CAPACITY
15180 17166 20590

ENTHALPY
8394 17166 20590

ENTROPY
8394 9819 17166 20590

VELOCITY OF SOUND
15180

THERMAL CONDUCTIVITY
25177

VISCOSITY
10759 16301 25177

EQUATIONS OF STATE (INCLUDES VIRIAL COEFFICIENTS)
10759 15180 17443 20007 23187

JOULE-THOMSON EFFECT
NONE

SURFACE TENSION
NONE

REFRIGERANT 23

PVT DATA (INCLUDES DENSITY AND COMPRESSIBILITY FACTOR)
9807

COMPRESSIBILITY
NONE

EXPANSIVITY (INCLUDES COEFFICIENT OF THERMAL EXPANSION)
NONE

VAPOR PRESSURE
9807 12204

MELTING LINE DATA
12204

TRIPLE POINT
NONE

BOILING POINT
12204

CRITICAL POINT
9807 12204

SOLID TRANSITION POINTS
NONE

PHASE DIAGRAM
NONE

LATENT HEAT (INCLUDES HEATS OF FUSION, SUBLIMATION AND VAPORIZATION)
12204

REFRIGERANT 23 (CONT.)

HEAT CAPACITY
9807

ENTHALPY
NONE

ENTROPY
NONE

VELOCITY OF SOUND
NONE

THERMAL CONDUCTIVITY
NONE

VISCOSITY
16301

EQUATIONS OF STATE (INCLUDES VIRIAL COEFFICIENTS)
9807

JOULE-THOMSON EFFECT
NONE

SURFACE TENSION
NONE

OTHER REFERENCES TO REFRIGERANT PROPERTIES

781 998 4403 6151 6167 6221 6386 8039 10731 10747
10823 10921 11014 11825 12405 13465 13681 14418 14718 14819
15049 15284 17399 18117 18831 18920 18921 20063 20338 20466
21176 24564 25010 25200 25237 25293

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*helium, *gaseous, *velocity of sound, *specific heat, *liquid, lambda temperature, *physical property, sound absorption;
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*oxygen, *nitrogen, *argon, *methane, *hydrogen, *liquid, *velocity of sound, *compressibility, density;

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Trans. Am. Soc. Mech. Engrs. 76, 1039-56 (1954) 2 fig 6 tab 14 ref
MF No. 46-G A3 B1 C2 D1 E2 F6 G1 54
compressibility factor, virial coefficient, *air, *nitrogen, *oxygen, *gaseous, *PVT data, *equation of state

00089 Mechanical properties of stainless steels at subzero temperatures.
Hoke,J.H. Mabus,P.G. Goller,G.N.
Metal Progr. 55, 643-48 (1949) 12 fig 1 tab 8 ref
A2 B1 C7 D E1 F6 G1 49
*stainless steel, *tensile property, tensile strength, yield strength, proportional limit, reduction of area, elongation, *notch property, impact strength, work hardening, heat treatment, ductility, ferrite, martensite

00128 Calorimetric studies at extremely low temperatures.
Keesom,W.H.
J. Phys. Radium 5, 373-84 (1934)
MF No. 89-E A2 B2 C5 D3 E1 F7 G1 34
*electrical conductivity, *magnesium, *alloy, phosphorbronze, *rare earth, cerium, resistivity;
A2 B2 C5 D3 E1
*thallium, *specific heat, *tin, *silver, *zinc, *lead, *debye constant;
A3 B2 C5 D3 E1
*PVT data, isobar, *helium, *liquid, *specific heat, *entropy, isochore, *density

00138 Heat conductivity of neon.
Bannewitz,E.
Ann. Physik 48, 577-92 (1915)
MF No. 77-S A3 B1 C8 D1 E1 F7 G1 15
*neon, *thermal conductivity, viscosity, *gaseous

00143 Isothermals of monatomic gases and their mixtures. XVII. Isothermals of neon and preliminary determinations concerning the liquid conditions of neon.
Onnes,H.K. Cromelin,C.A.
Koninkl. Ned. Akad. Wetenschap. Proc. 18, 515-20 (1916)
MF No. 80-M A3 B1 C6 D1 E1 F7 G1 16
*neon, *liquid, *gaseous, *PVT data, *equation of state, virial coefficient, *density, *vapor pressure, law of corresponding states, isotherm, *triple point, *boiling temperature

00184 Heat of vaporization of oxygen in the temperature range of 80 degrees to 106 degrees K.
Alichanov,R.A.
Soviet Phys. JETP 2, 771-73 (1956) 1 fig 5 ref
MF No. 8-Z A3 B1 C7 D1 E1 F6 G1 56
*heat of vaporization, *oxygen, *liquid

00198 A temperature-entropy diagram for neon.
Troyer,B.D.
Colorado Univ., Boulder, Master Thesis (1959)
72 pp
A3 B1 C1 D1 E F9 G7 59
*neon, *T-S diagram, *entropy

00203 L'etude de la courbe des densities a basse temperature au Laboratoire cryogene de Leiden. A study of density curves at low temperatures at the Leiden Cryogenic Laboratory.
Mathias,E.
Physik. Ber. 4, 701-02 (1923)
MF No. 56-U A3 B1 C5 D1 E1 F7 G1 23
*oxygen, *argon, *nitrogen, *hydrogen, *liquid, *gaseous, *density, *helium, *neon, law of rectilinear diameters, critical region, saturated vapor

00204 The heat capacities of the elements below room temperature.
Shiffman,C.A.
Gen. Elec. Res. Lab., Schenectady, N.Y. (Oct 1952) 70 pp 264 ref
A2 B1 C5 D1 E2 F8 G5 52
*aluminum, *beryllium, *bismuth, *cadmium, *carbon, *graphite, *chromium, *cobalt, *copper, *gallium, *germanium, *gold, *specific heat, compilation;
A2 B1 C5 D1 E2
*hafnium, *indium, *iridium, *iron, *lead, *lithium, *magnesium, *manganese, *mercury, *molybdenum, *nickel, *niobium, *specific heat, compilation;
A1 B1 C5 D1 E1
*bibliography, specific heat, element;

00207 Atomic function of some gases in the light of revised viscosity determinations.
Majmudar,V.D. Oka,V.S.
J. Univ. Bombay A17, No. 25, 35-40 (Mar 1949)
MF No. 73-C A3 B1 C2 D1 E1 F7 G1 49
*viscosity, *air, *hydrogen, *oxygen, *nitrogen, *neon, *carbon dioxide, *ethane, *methane, *gaseous

00211 Funfundzwanzig Jahre Nernstscher warmesatz. Twenty-five year Nernst heat theorem.
Simon,F.E. Whol,K.
Ergeb. exakt. Naturw. 9, 223-74 (1930)
MF No. 82-K A2 B3 C1 D1 E2 F7 G1 30
*copper, *silver, *nickel, *cobalt, *iron, *silicon, *tin, *lithium, *sodium, *potassium, *specific heat, *glass;
A3 B3 C5 D1 E2
*helium, *liquid, *density, *melting curve, temperature effect

00218 Dieci anni de ricerche sui gas. Sixteen years of research on gases.
Moles,E.
Gazz. chim. ital. 56, 915-47 (1926) 4 fig 12 tab 49 ref
MF No. 78-Q A3 B3 C2 D1 E1 F7 G1 26
*density, *oxygen, *air, *nitrogen, *ammonia, *gaseous, sulfur dioxide, oxide of nitrogen, hydrogen chloride

00224 Contributions to the data on theoretical metallurgy. XI. Entropies of inorganic substances. Revision (1948) of data and methods of caclulation.
Kelley,K.K.
U. S. Bur. Mines Report (1950)
A2 B1 C2 D1 E3 F4 G6 50
*element, *specific heat, *entropy, *inorganic solid, *oxide, *intermetallic compound, carbide, nitride, nitrate, silicate, carbonate, sulphur compound, halide, hydride;
A3 B1 C2 D1 E3
*argon, *neon, *fluorine, *hydrogen, *nitrogen, *oxygen, *entropy, compilation, *gaseous, *specific heat

00225 Intermolecular forces in air.
Friedman,A.S.
J. Res. Natl. Bur. Standards 58, No. 2, 93-94 (1957)
MF No. 37-Z A3 B1 C7 D1 E2 F6 G1 57
*air, *gaseous, second virial coefficient, *equation of state, virial coefficient, third virial coefficient, intermolecular force, lennard-jones function;
A3 B1 C7 D1 E2
*oxygen, *nitrogen, *gaseous mixture, *binary system, *equation of state, second virial coefficient

00230 The vapor pressure of liquid nitrogen.
Friedman,A.S. White,D.
J. Am. Chem. Soc., 72, 3931-32 (Sept 1950) 3 fig 3 tab 10 ref
CA 45-1400 MF No. 81-V A3 B1 C7 D1 E1 F6 G1 50
*vapor pressure, *liquid, *nitrogen, *heat of vaporization, *boiling point

00275 Spezi fische warme, entropie und dissoziation technischer gase und dampfe. Specific heat, entropy and dissociation of gases and vapors.
Justi,E. Luder,H.
Forsch. Gebiete Ingenieurw. B6, No. 5, 209-16 (Oct 1935)
MF No. 70-D A3 B3 C2 D1 E1 F7 G1 35
*specific heat, *entropy, *thermochemistry, dissociation constant, *gaseous, *hydrogen, *deuterium, *hydrogen deuteride, *nitrogen, *oxygen, *carbon monoxide, *air;
A3 B3 C2 D1 E1
*specific heat, *entropy, *thermochemistry, dissociation constant, *gaseous, *water, heavy water, *inorganic fluid, oxide of nitrogen, sulphur dioxide

00293 Vapor pressure of liquid oxygen and nitrogen.
Dodge,B.F. Davis,H.N.
J. Chem. Soc. 49, 610-20 (1927) 2 fig 6 tab 30 ref
MF No. 63-M A3 B1 C7 D1 D1 F6 G1 27
*oxygen, *liquid, *gaseous, *nitrogen, *vapor pressure, *equation of state, *PVT data

00318 Regulare losungen von gasen in flussigkeiten. II. Konzentrierte losungen des wasserstoffs bei hohen drucken. Regular solutions of gases in liquids. II. More concentrated solutions of H2 at high pressures.
Gonikberg,M.G.
Acta Physicochim U.R.S.S. 12, 921-30 (1940) 1 fig 3 tab 14 ref
MF No. 60-X A3 B3 C7 D1 E1 F7 G1 40
*hydrogen, *nitrogen, *gaseous mixture, *liquid mixture, *binary system, *chemical potential, fugacity, pressure effect, *density;
A3 B3 C7 D1 E1
*hydrogen, *methane, *gaseous mixture, *liquid mixture, *binary system, *density;

00332 An investigation of the thermodynamical properties of air and nitrogen at high pressures and low temperatures. I. The isothermal Joule-Thomson effect for air and nitrogen.
Ishkin,J.P. Kaganer,M.G.
Soviet Phys. Tech. Phys. 1, 2255-62 (1956)
MF No. 44-U A3 B1 C7 D1 E1 F6 G1 56
*air, *nitrogen, *gaseous, *Joule-thomson coefficient, temperature effect

00370 Assembled tables of p-v-t data of gaseous and liquid mixtures.
Tsang,W.K.
Wisconsin Univ., Madison, Rept. No. 13 (Aug 1956) Contr. No. DA-11-022-ORD-934, Proj. No. TB-0001(664) 200 pp 1 fig 3 tab 48 ref
MF No. 97-J A3 B1 C1 D1 E2 F8 G5 56
hydrogen, *nitrogen, *carbon dioxide, *methane, *hydrocarbon, *water, *binary system, *PVT data, *critical region, compressibility factor, *density, *gaseous mixture, *liquid mixture

00374 Die innere reibung von gasen und dampfen und ihre messung im Hoppler-viskosimeter. The viscosity of gas vapors and their measurements in a Hoppler viscosimeter.
Wobser,R. Muller,Fr.
Kolloid-Beih. 52, 165-276 (1941) 27 fig 122 tab
MF No. 72-V A3 B3 C2 D1 E1 F7 G1 41
theory, *viscosity, *oxygen, *nitrogen, *hydrogen, chlorine, *argon, *helium, *neon, *ammonia, *carbon dioxide, *carbon monoxide, *gaseous, *halogen

00375 The heat capacity of gases at low pressure using a wire ribbon method.
Vanderkooi,W.N.
Purdue Univ., Lafayette, Ind. Ph. D. Thesis (Jan 1956) 269 p 33 fig 65 tab 42 ref (Univ. Microfilms, Inc., Ann Arbor, Mich. Publ. No. 16498)
MF No. 80-L A3 B1 C2 D1 E1 F9 G7 56
*helium, *neon, *argon, *hydrocarbon, halide, *specific heat, *accomodation coefficient, *gaseous

00378 The physical properties of solid and liquid helium.
Satterly,John
Rev. Mod. Phys. 8, 347-57 (Oct 1936) 18 fig 1 tab 19 ref
MF No. 62-A A3 B1 C5 D1 E2 F6 G1 36
*helium, *liquid, *thermodynamic property, *density, coefficient of expansion, *surface tension, *viscosity, *compressibility, *electrical property, *velocity of sound, *refractive index, *solidified gas, *entropy, *thermal conductivity

00405 Density of liquefied gas solutions nitrogen-oxygen and argon-oxygen.
Blagoi,Yu.P. Rudenko,N.S.
Izvest. Vysshikh Ucheb. Zavenden. Fiz. No. 6, 145-51 (1958)
2 fig 5 tab 13 ref
MF No. 72-W A3 B7 C7 D E F7 G1
*liquid mixture, *density, *oxygen, *nitrogen, *binary system, *argon

00406 The thermal conductivity of liquid and gaseous oxygen.
Burton,J.T.A. Ziebland,H.
Gt. Brit. Ministry of Supply, Rept. No. E.R.D.E. 2/R56 (Jan 1956) 11 pp 4 fig 3 tab 15 ref
ASTIA AD 90 759 MF No. 75-H A3 B1 C7 D E1 F5 G6
*oxygen, *liquid, *gaseous, *thermal conductivity, temperature effect

00407 Vapor-pressure of the deutero-methanes.
Armstrong,G.T. Brickwedde,F.W. Scott,R.B.
J. Chem. Phys. 21, 1297-98 (1953)
A3 B1 C7 D1 E1 F6 G1
*methane, *deutero compound, deutero methane, *vapor pressure, *triple point, *liquid, *solidified gas, saturated liquid

00408 Vapor pressure of nitrogen
Armstrong,G.T.
J. Research Natl. Bur. Standards 53, No. 4, 263-66 (Oct 1954)
RP2543, 1 fig 4 tab 11 ref
A3 B1 C7 D1 E1 F6 G1
*nitrogen, *vapor pressure, *liquid, fugacity, saturated vapor

00411 Coefficient of expansion of liquid helium II.
Atkins,K.R. Edwards,M.H.
Phys. Rev. 97, No. 6, 1429-34 (Mar 15, 1955).
A3 B1 C4 D3 E2 F6 G1 55
*helium, *liquid, helium I, thermal expansion, temperature effect, *expansivity

00418 The viscosity of the normal part of liquid helium II from heat conduction experiments.
Van Groenou,A.B. Poll,J.D. Delsing,A.M.G. Gorter,C.J.
Physica 22, 905-10 (Oct 1956) Commun. Kamerlingh Onnes Lab. Univ., Leiden, No. 304f (1956) 6 pp
CA 52 9690 A3 B1 C5 D1 E1 F6 G1
*helium, helium I, *liquid, *viscosity, *thermal conductivity

00419 Joule-Thomson effects in compressed gaseous hydrogen.
Canky,P. White,D. Johnston,H.L.
Ohio State Univ., Res. Foundation, Cryogenic Lab. Columbus, Tech. Rept. 264-18 (May 1952) Contr. No. AF W33-038-ac-14794 (16243)
ASTIA ATI 162 586 A3 B1 C1 D1 E1 F5 G5
*hydrogen, *gaseous, *enthalpy, table, apparatus, coolant, air, nitrogen, oxygen, freon, joule-thomson cooling

00420 Pressure-volume isotherms of He4 below 4.2 degrees K.
Keller,W.E.
Phys. Rev. 97, No. 1, 1-8 (Jan 1955) 6 fig 3 tab 17 ref
CA 48 5911 A3 B1 C5 D1 E1 F6 G1
*helium, helium 4, *gaseous, *PVT data, isotherm, *liquid, *density, *equation of state, second virial coefficient, pressure effect

00421 Melting curves of deuterium and hydrogen
Chester,P.F. Dugdale,J.S.
Phys. Rev. 95, 278-79 (1954) 1 fig 1 tab 3 ref
A3 B1 C1 D1 E1 F6 G1
*melting curve, *deuterium, *hydrogen

00424 Joule-Thomson effects in deuterium at liquid air and at room temperatures.
Johnston,H.L. Swanson,C.A. Wirth,H.E.
J. Am. Chem. Soc. 68, 2373-77 (Nov 1946)
MF No. 67-Y A3 B1 C1 D1 E1 F6 G1
*deuterium, *hydrogen, *isotope, *joule-thomson coefficient, cryogenic temperature

00425 Liquid helium vapor-pressure temperature scale.
Clement,J.R.
Naval Research Lab., Washington, D.C., 7 p 12 ref
A3 B1 C1 D1 E2 F7 09 00
*helium, *vapor pressure, *liquid, temperature scale

00426 Die spezifischen Warmen des Parawasserstoffs in festem, flussigem und gasformigem Zustande. The specific heat of parahydrogen in solid, liquid and gas state.
Clusius,K. Hiller,K.
Z. Physik Chem. (Leipzig) B4, 158-68 (1929)
MF No. 3-W A3 B3 C6 D1 E1 F7 G1
*parahydrogen, *specific heat, *liquid, *gaseous, *heat of fusion, *solidified gas

00427 Isotherms of di-atomic substances and their binary mixtures. XXX. On the isotherms of hydrogen from -217 degrees to -240 degrees C at pressures up to 60 atmospheres.
Crommelin,C.A. Swallow,J.C.
Commun. Kamerlingh Onnes Lab. Univ. Leiden No. 172a, 1-9 (Jun 1924) and Proc. of the Fourth Intern. Congr. of Refrig., London, 1924, 53a-59a
MF No. 124-A A3 B1 C1 D1 E1 F7 G1
*hydrogen, *isotherm, *PVT data

00428 The vapour pressures of solid and liquid neon.
Crommelin,C.A. Gibson,R.O.
Commun. Kamerlingh Onnes Lab. Univ. Leiden 17, No. 185b, 18-20 (1927)
A3 B1 C6 D1 E1 F7 G1
*neon, *liquid, *vapor pressure, temperature effect, *solidified gas, saturated liquid

00429 Density and viscosity of normal fluid in dilute solutions of He3 in He4.
Dash,J.G. Taylor,R.D.
Phys. Rev. 107, 1228-37 (Sept 1957)
A3 B1 C1 D1 E1 F6 G1
*helium, *liquid, helium 3-helium 4, helium 4, *density, *viscosity, concentration effect

00434 Thermal conductivity of solid argon at low temperatures.
White,G.K. Woods,S.R.
Nature 177, 851-52 (1956)
MF No. 84-J A3 B1 C5 D3 E1 F7 G1 56
*thermal conductivity, *argon, *solidified gas, equation

00435 Specific heats of pure He4 and of a mixture of He4 with 2.50% of He3 between 1 degree K and 2.3 degrees K.
Dokoupil,Z. Van Soest,G. Wansink,D.H.N. Kapadnis,D.G.
Commun. Kamerlingh Onnes Lab., Univ. Leiden, No. 298a (1955) Reprint from Physica 20, 1181 (1954)
A3 B1 C5 D1 E1 F7 G1
*specific heat, *helium, *liquid, *liquid mixture, helium 3-helium 4, lambda temperature, helium 4, saturated liquid, temperature effect

00441 Calculating properties of gases and gas mixtures.
Granet,Irving
Petrol. Refiner 32, 125-28 (1953) 3 fig 4 tab 26 ref
A3 B1 C2 D1 E2 F6 G1
*gaseous, *gaseous mixture, *nitrogen, *thermal conductivity, *viscosity, *reduced variable, law of corresponding states, equation, calculation

00442 IV. Vapor pressure, specific volume, PVT data for H2, N2, O2, CO, CO2, air, He, A, Hg
Gratch,Serge
Trans. Am. Soc. Mech. Engrs. 70, 631-40 (1948) 9 fig 1 tab 154 ref
MF No. 36-S A3 B1 C1 D1 E2 F6 G1
*hydrogen, *nitrogen, *helium, *argon, *oxygen, *carbon monoxide, *carbon dioxide, *air, *compressibility, *gaseous, *equation of state, *review, *liquid, vapor pressure, *gaseous mixture, *binary system

00444 The vapor pressure of hydrogen, deuterium and tritium up to 3 atm.
Grilly,E.R.
J. Am. Chem. Soc. 73, 843-6 (1951) 2 fig 5 tab 12 ref
MF No. 17-V A3 B1 C1 D1 E1 F6 G1
*hydrogen, *liquid, *vapor pressure, *deuterium, *tritium, *isotope, law of corresponding states

00446 Relationships between transport properties of gases
Grilly,E.R.
Am. J. Phys. 20, 447-50 (1952) 3 fig 12 ref
A3 B1 C7 D1 E2 F6 G1
*gaseous, *thermal conductivity, *viscosity, *specific heat, *helium, *hydrogen, *oxygen, *carbon monoxide, *carbon dioxide, *methane, oxide of nitrogen, prandtl number

00447 Volume change on melting of N2 up to 3500 kg/cm2.
Grilly,E.R. Mills,R.L.
Phys. Rev. 105, No. 4, 1140-45 (Feb 1957) 4 fig 2 tab 24 ref
A3 B1 C1 D1 E1 F6 G1
*nitrogen, *melting curve, *density, *expansivity, *solidified gas, *liquid, coefficient of expansion

00449 Some calculated properties of tritium.
Hammel,E.F.
J. Chem. Phys. 18, No. 2, 228-29 (1950) 3 fig 3 tab 3 ref
CA 44 6215b A3 B1 C1 D1 E3 F6 G1
*tritium, *deuterium, *liquid, *vapor pressure, *critical constants, *triple point

00450 The viscosity of compressed gases.
Lelpunsky,O.
Acta Physicochim. U.R.S.S. 18, 172-82 (1943)
MF No. 29-C A3 B1 C2 D1 E2 F7 G1
*viscosity, *gas, *pressure, *mixture, *compressed gas, *nitrogen, *hydrogen, *carbon dioxide, *carbon monoxide, *oxygen, *ammonia, *methane, *water vapor, enskog's formula

00453 Tables of thermal properties of gases
Hilsenrath,J. Beckett,C.W. Benedict,W.S. Fano.L. Hoge,H.J. Masi,J.F. Nuttall,R.L. Touloukian,Y.S. Woolley,H.W.
Natl. Bur. Standards Circ. 564 (Nov 1955) 209 ref
A3 B1 C5 D1 E1 F4 G6
*technical gas, *argon, *steam, *compressibility factor, *density, *specific heat, *enthalpy, *entropy, *velocity of sound, *viscosity, thermal conductivity, *gaseous, prandtl number

00454 Vapor pressures of hydrogen, deuterium, and hydrogen deuteride and dew-point pressures of their mixtures.
Hoge,H.J. Arnold,R.D.
J. Res. Natl. Bur. Standards 47, No. 2, 63-74 (Aug 1951)
RP 2228, 6 fig 10 tab 16 ref
A3 B1 C6 D1 E1 F6 G1
*hydrogen, *deuterium, *hydrogen deuteride, *vapor pressure, *parahydrogen, orthodeuterium, *triple point, *liquid, saturated liquid, *liquid mixture, *ternary system, dew point

00455 Vapor pressure and fixed points of oxygen and heat capacity in the critical region
Hoge,H.J.
J. Research Natl. Bur. Standards 44, 321-45 (1950) RP 2081
A3 B1 C6 D1 E1 F6 G1
*oxygen, *specific heat, *vapor pressure, *liquid, *solidified gas, critical region, triple point, boiling point, *thermometry, fixed points, *hydrogen, *nitrogen, temperature scale

00457 An equation of state in analytical form
Ishikawa,Tetsuya
Bull. Chem. Soc. Japan 26, No. 2, 78-83 (1953) 2 fig 6 tab 9 ref
MF No. 35-L A3 B1 C8 D1 E2 F7 G1
*equation of state, *carbon dioxide, *xenon, *hydrocarbon, *gaseous, *inert gas, *technical gas, pressure, van der waals, *neon

00458 Measurements of the viscosity of helium gas at liquid helium temperatures as a function of temperature and pressure.
Van Itterbeek,A. Schapink,F.W. Van den Berg,G.J.
Van Keek,H.J.M.
Physica 14, 1158-62 (1953)
CA 48 11134h A3 B1 C5 D1 E1 F6 G1 53
*helium, *viscosity, *gaseous, temperature effect, pressure effect

00459 Measurements on the 2nd virial coefficient of nitrogen between 90 and 64 degrees K with the use of ultrasonics.
Van Itterbeek,A. Lambert,H. Forrez,G.
Appl. Sci. Research A6, 15-20 (1955)
MF No. 121-C A3 B1 C1 D1 E1 F7 G1 55
*equation of state, *nitrogen, *virial coefficient, second virial coefficient, velocity of sound, specific heat, lennard-jones function

00461 Difference in viscosity of ortho and para-hydrogen at low temperatures.
Becker,E.W. Stehl,O.
Phys. Rev. 67, 525 (1952) 1 fig 2 ref
MF No. 38-T A3 B1 C6 D3 E1 F6 G1 52
*hydrogen, *viscosity, *gaseous, normal hydrogen, *parahydrogen, temperature effect

00462 The triple point of carbon dioxide as a thermometric fixed point
Ambrose,D.
Brit. J. Apl. Phys. 8, 32-34 (Jan 1957) 2 fig 8 ref
MF No. 67-U A3 B1 C8 D1 E1 F7 G1
*carbon dioxide, *triple point, *solidified gas, *liquid, *gaseous

00463 Joule-Thomson effects in hydrogen at liquid air and at room temperatures.
Johnston,H.L. Bezman,I.I. Hood,C.B.
J. Am. Chem. Soc. 68, 2367-73 (Nov 1946)
A3 B1 C1 D1 E1 F6 G1
*hydrogen, *joule-thomson coefficient, *specific heat, high pressure

00464 VII. A summary of experimental determination of Joule-Thomson effects in gases.
Johnston,H.L. White,D.
Trans. Am. Soc. Mech. Engrs. 70, 651-5 (1948) 56 ref
MF No. 67-D A3 B1 C8 D2 E2 F6 G1
*joule-thomson effect, *technical gas, *inert gas, *hydrocarbon, review, bibliography, *gaseous

00469 Thermodynamic properties of nitrogen as functions of pressure and temperature between 0 and 6000 atmospheres and -125 degrees and 150 degrees C.
Lunbeck,R.J. Michels,A. Wolkers,G.J.
Appl. Sci. Res. 3, 197-210 (1952)
MF No. 29-Y A3 B1 C8 D1 E F7 G1
*nitrogen, *PVT data, *entropy, *enthalpy, *specific heat, *joule-thomson coefficient, high pressure

00470 Temperature dependence of viscosity liquid argon.
Zhdanova,N.F.
Soviet Phys. JETP 4, No. 5, 749-50 (Jun 1957) 2 fig 1 tab 4 ref (Trans. from: Zhur. Eksptl. i Tecret. Fiz. 31, 724-5, 1956)
MF No. 78-A A3 B1 C7 D1 E1 F6 G1 57
*argon, *viscosity, *liquid, *gaseous, *density, temperature effect, isochore

00471 Calculation of the viscosity of gaseous He3 and He4 at low temperatures.
Keller,W.E.
Phys. Rev. 106, 41-45 (1957)
MF No. 38-P A3 B1 C5 D1 E1 F6 G1 57
*helium, *gaseous, theory, *viscosity, helium 3, helium 4, equation, temperature effect

00473 Density of liquid He4.
Kerr,E.C.
J. Chem. Phys. 26, 511-14 (1957)
MF No. 49-T A3 B1 C5 D1 E1 F6 G1
*helium, *liquid, *density, helium 4, saturated liquid

00475 Physical property measurements at low temperatures.
Kerr,E.C.
Proc. Instr. Soc. Am. 10, Part 2 (1955) Paper No. 55-2-4
A3 B1 C1 D1 E1 F6 G1
*melting curve, *helium, *isotope, *deuterium, *neon, *oxygen, *nitrogen, *hydrogen, density, helium 3, cryostat

00476 Molar volumes of liquid deuterium and of a 1:1 mixture of tritium and deuterium 19.5 to 24.5 degrees K.
Kerr,E.C.
J. Am. Chem. Soc. 74, 824-25 (1952)
A3 B1 C6 D1 E1 F6 G1
*deuterium, *tritium, *density, *liquid, *liquid mixture, *binary system

00478 Second virial coefficients of He3 and He4.
Kilpatrick,J.E. Keller,W.E. Hammel,E.F. Metropolis,N.
Phys. Rev. 94, No. 5, 1103-10 (Jun 1954) 5 fig 1 tab 18 ref
A3 B1 C4 D1 E2 F6 G1 54
*helium, *gaseous, *equation of state, lennard-jones function, second virial coefficient, helium 3, helium 4

00479 Isotherms of helium gas from 2.7 to 1.7 degrees K.
Kistemaker,J. Keesom,W.H.
Physica 12, 227-40 (Jul 1946) 5 fig 4 tab 13 ref Reprint from Commun. Kamerlingh Onnes Lab., Univ. Leiden, No. 269 b (1946)
A3 B1 C5 D1 E1 F6 G1
*helium, *gaseous, *PVT data, compressibility factor, *density, isotherm, *equation of state, second virial coefficient, virial coefficient, third virial coefficient

00480 The vapour pressure of liquid helium from the lambda point to 1.3 degrees K.
Kistemaker,J.
Physica 12, 272-80 (Aug 1946) 5 tab 13 ref, Reprint from Commun. Kamerlingh Onnes Lab., Univ. Leiden, No. 269 c (1946)
A3 B1 C5 D1 E1 F6 G1
*helium, *liquid, *vapor pressure, lambda temperature

00482 Compressions and solid phases of CO2, CS2, COS, O2, and CO.
Stevenson,R.
J. Chem. Phys. 27, No. 3, 673-75 (1957)
A3 B1 C7 D3 E1 F6 G1 57
*carbon dioxide, *inorganic solid, carbon disulfide, carbon oxysulfide, *oxygen, *carbon monoxide, *solidified gas, *phase transition property, solid-solid transition, *phase diagram, pressure effect

00483 Vapor-liquid equilibria of nitrogen-argon-oxygen mixtures
Latimer,R.E.
Am. Inst. Chem. Engrs. J. 3, No. 1, 75-82 (Mar 1957) 12 fig 3 tab 10 ref
MF No. 58-L A3 B1 C7 D1 E2 F6 G1
*phase equilibrium, *nitrogen, *argon, *oxygen, *liquid mixture, *binary system, *ternary system, *vapor pressure

00484 Some thermal constants of solid and liquid carbon dioxide.
Maass,O. Barnes,W.H.
Proc. Roy. Soc. (London) A111, 224-44 (1926)
MF No. 41-K A3 B1 C7 D1 E1 F6 G1
*carbon dioxide, *specific heat, *liquid, *solidified gas, heat of fusion, heat of sublimation, *enthalpy, *density, *coefficient of expansion

00485 Survey of experimental determinations of heat capacity of ten technically important gases
Masi,J.E.
Trans. Am. Soc. Mech. Engrs. 76, 1067-74 (1954) 8 fig 2 tab 53 ref
CA 48-13308f MF No. 42-L A3 B1 C7 D1 E2 F6 G1
*specific heat, *ammonia, *carbon dioxide, *carbon monoxide, *hydrogen, *methane, *nitrogen, *oxygen, *water, oxide of

00486 The rectilinear diameter of hydrogen.
Mathias,E. Crommelin,C.A. Onnes,H.K.
Commun. Phys. Lab. Univ. Leiden No. 154b (1921)
A3 B1 C6 D1 E1 F6 G1
*hydrogen, *liquid, *gaseous, *density, saturated liquid, saturated vapor, law of rectilinear diameter

00487 The density and compressibility of solid hydrogen and deuterium at 4.2 degrees K.
Megaw,H.D.
Phil. Mag. 28, 129 (1939)
MF No. 41-I A3 B1 C5 D1 E1 F6 G1 39
*helium, *liquid, *density, pressure effect, *compressibility;
A3 B1 C5 D1 E1
*hydrogen, *deuterium, *solidified gas, *density, *compressibility, *expansivity, thermal expansion, pressure effect

00488 Pressure-volume-temperature data for oxygen.
Meyers,C.H.
J. Res. Natl. Bur. Standards 40, 457-66 (1948)
A3 B1 C7 D1 E3 F6 G1
*oxygen, *PVT data, *gaseous, *equation of state, virial coefficient, second virial coefficient, third virial coefficient, compressibility factor, *density

00490 Melting curves of He, He3, He4, D2, Ne, N2, and O2 up to 3500 kg/cm2
Mills,R.L. Grilly,E.R.
Phys. Rev. 99, No. 2, 480-86 (Jul 1955) 6 fig 2 tab 31 ref
CA 49-15329-i MF No. 159-I A3 B1 C5 D3 E1 F6 G1
*melting curve, *helium, *deuterium, *neon, *nitrogen, *oxygen, *phase transition property, helium 3, helium 4, very high pressure, *solidified gas, equation, pressure effect

00492 Second virial coefficients of helium from the exp-six potential.
Kilpatrick,J.E. Keller,W.E. Hammel,E.F.
Phys. Rev. 97, No. 1, 9-12 (Jan 1955) 3 fig 3 tab 8 ref
A3 B1 C1 D1 E1 F6 G1 55
*helium, virial coefficient, *gaseous, *equation of state, intermolecular force, second virial coefficient, helium 3, helium 4

00493 Isothermals of di-atomic substances and their binary mixtures. XIX. A preliminary determination of the critical point of hydrogen.
Onnes,H.K. Crommelin,C.A. Cath,P.G.
Commun. Kamerlingh Onnes Lab. Univ. Leiden No. 151c, 25-32 (May 1917) 1 fig 3 tab 12 ref Trans. from Verslag. Gewone Vergader. Afdel. Natuurk. Koninkl. Ned. Akad. Wetenschap. 26, 124-29 (May 1917)
MF No. 171-I A3 B1 C6 D1 E1 F7 G1
saturated liquid, saturated vapor, *hydrogen, *critical constant, *liquid, *gaseous, *density, critical temperature, critical pressure, critical density, *vapor pressure

00494 Isotherms of diatomic substances and of their binary mixtures. XII. The compressibility of hydrogen vapour at, and below, the boiling point.
Onnes,H.K. De Haas,W.J.
Commun. Phys. Lab. Univ. Leiden No. 127 c (May 1912)
MF No. 122-D A3 B1 C6 D1 E1 F7 G1 12
*equation of state, *hydrogen, virial coefficient, *gaseous, *PVT data, compressibility factor, *density

00502 Measurement of the elasticity of solid argon by ultrasonic methods.
Barker,J.R. Dobbs,E.R. Jones,G.O.
Phil. Mag. 44, 1182-84 (1953)
MF No. 121-H A3 B1 C7 D1 E1 F6 G1 53
*argon, *solidified gas, *compressibility, *expansivity, mechanical property

00508 Temperature-entropy diagrams for hydrogen, nitrogen, carbon monoxide, ethane, and ethylene.
Bolshakov,P.E. Gemburg,D.Yu. Yefremova,G.D. Khaznanova,D.S. Tsiklis,D.S.
Referat. Zhur. Fiz. No. 7-9, Abstract No. 13635, 96 (1955)
MF No. 65-H A3 B7 C6 D1 E2 F7 G1 55
*hydrogen, *nitrogen, *carbon monoxide, *ethane, *ethylene, *gaseous, *entropy, T-S diagram

00509 Measurement of the elasticity of solid argon with an ultrasonic interferometer.
Barker,J.R. Dobbs,E.R.
Phil. Mag. 46, 1069-80 (Oct 1955) 23 ref
MF No. 44-S A3 B1 C7 D1 E1 F6 G1 55
*argon, *solidified gas, *compressibility, *expansivity, mechanical property, gruneisen parameter

00513 Temperature entropy chart of thermodynamic properties of nitrogen.
Burnett,E.S.
U. S. Bur. Mines, Rept. of Investigation No. 4729 (1950) 9 pp 38 ref
CA 44, 1041le MF No. 46-Z A3 B1 C1 D1 E2 F9 G9
*nitrogen, *thermodynamic property, solid, PVT measurement, *entropy, *enthalpy, *gas, *liquid

00517 The constants of the Beattie-Bridgeman equation of state with Bartlett's P-V-T data on hydrogen.
Deming,W.E. Shupe,L.E.
J. Am. Chem. Soc. 53, 843-49 (1931)
CA 25 2612 MF No. 51-N A3 B1 C1 D1 E1 F6 G1
*equation of state, *hydrogen, *compressibility factor, *density, beattie-bridgeman equation of state, PVT data

00520 Energy, enthalpy and entropy of gases according to the most recent determinations.
Faggiani,Dalberto
Termotecnica (Milan) 1, 108-13 (1947)
A3 B5 C8 D1 E2 F7 G1 47
*enthalpy, *entropy, *gaseous, *hydrogen, *oxygen, *nitrogen, *carbon monoxide, *carbon dioxide, *water, review, compilation

00523 The heat conductivity of solid methane.
Gerritsen,A.N. Van Der Star,P.
Physica 9, 503-12 (May 1952)
MF No. 28-O A3 B1 C1 D1 E1 F6 G1
*methane, *thermal conductivity, *transition temperature, solid

00527 The heat capacity of oxygen from 12 degrees K to its boiling point and its heat of vaporization. The entropy from spectroscopic data
Giauque,W.F. Johnston,H.L.
J. Am. Chem. Soc. 51, 2300-21 (Aug 1929) 7 tab
MF No. 139-E A3 B1 C6 D1 E1 F6 G1
*oxygen, *specific heat, *transition range, *heat of fusion, *heat of vaporization, *entropy, *magnetic property, paramagnetism, magnetic susceptibility, spectroscopic data

00530 The viscosity of gas mixtures.
Heath,H.R.
Proc. Phys. Soc. (London) B66, 362-7 (1953) 2 fig 2 tab 12 ref
MF No. 38-W A3 B1 C2 D1 E1 F7 G1
*helium, *hydrogen, *viscosity, *gaseous mixture, *argon, *nitrogen, *carbon dioxide, low pressure, diffusion

00534 Structure of solid helium by neutron diffraction.
Henshaw,D.G.
Phys. Rev. 109, No. 2, 328-30 (Jan 1958) 1 fig 1 tab 11 ref
A3 B1 C5 D1 E1 F6 G1 58
*helium, *solidified gas, *density, *compressibility, crystal structure

00535 The zero-point kinetic energy of liquid helium.
Henshaw,D.G. Hurst,D.G.
Can. J. Phys. 33, 797-800 (1955) 3 tab 6 ref
A3 B1 C5 D1 E2 F7 G1 55
zero point, energy, *helium, *liquid, *heat of vaporization, diffraction

00536 The variation with temperature of the surface energies and densities of liquid oxygen, nitrogen, argon, and CO.
Baly,E.C.C. Donnan,F.G.
J. Chem. Soc. 81, 907-23 (1902)
MF No. 82-V A3 B1 C1 D1 E1 F6 G1 02
*oxygen, *liquid, *nitrogen, *argon, *carbon monoxide, *surface tension, surface energy, *density

00538 Some physical properties of pure liquid ozone and ozone-oxygen mixtures.
Jenkins,A.C. DiPaolo, F.S.
J. Chem. Phys. 25, No. 2, 296-301 (Aug 1956)
MF No. 38-R A3 B1 C1 D1 E1 F6 G1
*ozone, *liquid, *viscosity, *melting point, *surface tension, *mixture. *oxygen

00542 Equation of state for gases at high pressures involving only critical constants
Maron,S.H. Turnbull,D.
J. Am. Chem. Soc. 64, 2195-98 (Sept 1942) 3 tab 7 ref
CA 63894 MF No. 51-O A3 B1 C8 D1 E2 F6 G1
*equation of state, *critical constants, *hydrogen, *helium, *carbon monoxide, *carbon dioxide, *oxygen, *ethylene, high pressure, nitric oxide, *gaseous, *methane, *propane, *ethane

00544 The viscosity of argon at pressures up to 2000 atmospheres.
Michels,A. Botzen,A. Schuurman,W.
Physica 20, 1141-8 (1954)
MF No. 38-L A3 B1 C8 D1 E1 F6 G1
*argon, *viscosity, *gaseous, pressure effect, very high pressures, density

00545 The viscosity of carbon dioxide between 0 degrees C and 75 degrees C and at pressures up to 2000 atmospheres
Michels,A. Botzen,A. Schuurman,W.
Physica 23, 95-102 (1957) 4 fig 10 tab 19 ref
MF No. 38-K A3 B1 C2 D1 E1 F6 G1
*carbon dioxide, *gaseous, *viscosity, *liquid, pressure dependence, *density

00546 The viscosity of hydrogen and deuterium at pressures up to 2000 atmospheres.
Michels,A. Schipper,A.C.J. Rintoul,W.H.
Physica 19, 1011-28 (1953)
MF No. 38-M A3 B1 C8 D1 E1 F6 G1 53
pressure effect, *viscosity, *hydrogen, *deuterium, *gaseous, high pressure

00552 The velocity of sound in hydrogen when rotational degrees of freedom fail to be excited.
Rhodes,E.J.Jr.
Phys. Rev. 70, 932-38 (1946)
MF No. 39-E A3 B1 C1 D1 E1 F6 G1
*velocity of sound, *hydrogen, *ortho-para hydrogen, dispersion, rotation

00553 Tables of thermodynamic properties of gases.
Rivkin,S.L.
Izvest. Vsesoyuz. Teplotekh. Inst. im. Feliksa Dzerzhinskogo 21, 8-11 (1952) 1 fig 5 tab
CA 46-8439h MF No. 52-H A3 B7 C8 D1 E1 F7 G1 52
*oxygen, *nitrogen, *water, *carbon dioxide, *gaseous, *enthalpy, *internal energy, *entropy

00561 The free energies and entropies of hydrogen, chlorine and hydrogen chloride from spectroscopic data.
Sherman,R.H. Glauque,W.F.
J. Am. Chem. Soc. 75, 2007 (1953)
A3 B1 C8 D1 E2 F6 G1 53
*hydrogen, chlorine, hydrogen chloride, *free energy, spectroscopic data, *entropy, fugacity, *halogen, *inorganic fluid, *gaseous

00562 Condensation theory by cell method and calculation of the critical temperatures of various gases
Shimokawa,Junighi
Busseiron Kenkyu 62, 138-51 (1953) 2 tab 2 ref
CA 48-7367g MF No. 52-M A3 B1 C1 D1 E2 F7 G1
*helium, *argon, *nitrogen, *hydrogen, *oxygen, *methane, condensation, free energy, *critical constant, surface tension, *molecular property, critical temperature

00565 The equation of state of hydrogen and its isotopes below 20 degrees K.
Beenakker,J.J.M. Varekamp,F.H.
Bull. IIR Annexe 1956-2, 189-94 (Presented at meeting of Comm. 1 and 2, Louvain, Sept 1956) 3 fig 1 ref
MF No. 74-L A3 B1 C6 D3 E1 F7 G1 56
second virial coefficient, *equation of state, *hydrogen, *deuterium, *helium, *gaseous

00566 Pressure, volume, temperature properties of nitrogen at high density. 1. Results obtained with a weight piezometer.
Benedict, M.
J. Am. Chem. Soc. 59, 2224-33 (1937)
MF No. 97-K A3 B1 C1 D1 E1 F6 G1
*nitrogen, *PVT data, *gaseous, high pressure

00567 Untersuchungen im kritischen Gebiet. III. Energiemessungen mittels Joule-Effektes. Investigations in the critical region. II. Energy measurements by means of the joule-thomson effect
Bennewitz,K. Andreeve,N.
Z. physik. Chem. 142A, 37-66 (1929) 6 fig 2 tab 20 ref
MF No. 68-L A3 B3 C1 D1 E1 F7 G1
*nitrogen, *oxygen, *methane, *isotherm, *gaseous, *argon, *carbon dioxide, *liquid, *internal energy, *joule-thomson coefficient, critical region, reduced variable, density

00575 Gaseous data of state. I. The pressure-volume-temperature relationships of gaseous normal hydrogen from the critical temperature to room temperature and up to 200 atmospheres pressure.
Johnston,H.L. White,D. Wirth,H. Swanson,C. Jensen,L.H. Friedman,A.S.
Ohio State Univ., Cryogenic Lab., Columbus, Tech. Rept. No. 264-25 (Nov 1953) Contr. No. AF W33-038 ac 14794 (16243) 15 pp 1 fig 2 tab 8 ref
ASTIA AD 27 621 A3 B1 C6 D1 E1 F5 G6 53
*hydrogen, *PVT data, *gaseous, second virial coefficient

00579 The direct determination of the critical temperature and pressure of normal hydrogen.
White,D. Friedman,A.S. Johnston,H.L.
J. Am. Chem. Soc. 72, 3565-68 (1950)
A3 B1 C6 D1 E1 F6 G1 50
*hydrogen, critical temperature, critical pressure, *vapor pressure, *critical constants, *liquid, *critical region, normal hydrogen

00580 The thermal conductivity of solid helium at high densities
Webb,F.J. Wilks,J.
Phil. Mag. 44, 664-74 (1953) 5 fig 8 ref
MF No. 49-Z A3 B1 C5 D1 E1 F6 G1
*thermal conductivity, *helium, density, high pressure, *solidified gas

00588 Uber die Diffusion in Gasen II. Beziehung zwischen der Selbst diffusion und der Zahigkeit. Diffusion in Edelgasen und Wasserstoff. Diffusion in gases II. Relation between self diffusion and viscosity. Diffusion in inert gases and hydrogen
Andrussow,Leonid
Z. physik. Chem. 199, 314-29 (1952) 6 tab 10 ref
MF No. 34-W A3 B3 C1 D1 E1 F7 G1
*rare gas, *gaseous, *viscosity, *argon, *helium, *water, *ammonia, *hydrogen, *methane, *neon, self diffusion, carbon tetrachloride, carbon disulfide, diffusion, *binary system, *inert gas

00592 Uber die Warmeleitfahigkeit der Gase. The heat conductivities of gases
Weber,Sophus
Ann. Physik 82, 479-503 (1927) 1 fig 14 tab 25 ref
MF No. 78-L A3 B3 C2 D1 E1 F7 G1
*thermal conductivity, *argon, *neon, *helium, *hydrogen, *nitrogen, air, *methane, *carbon dioxide, *gaseous

00595 Dispersion of the velocity and anomalous absorption of sound in hydrogen.
Stewart,S.
Phys. Rev. 69, 632-40 (1946)
MF No. 39-C A3 B1 C8 D1 E1 F6 G1 46
*velocity of sound, *hydrogen, *gaseous, *physical property, sound absorption

00604 Die Reibung,Warmeleitung und Diffusion in Gasmischungen, XI. Die Reibung von H2, N2, CO, C2H4, O2 und ihren binaren Gemischen. Viscosity, heat conduction, and diffusion in gas mixtures, XI. The viscosities of H2, N2, CO, C2H4, O2, and their binary mixtures.
Trautz,M. Melster,A.
Ann. Physik 7, 409-26 (May 1930) 14 tab 1 ref
MF No. 84-X A3 B3 C8 D1 E1 F7 G1 30
*hydrogen, *nitrogen, *carbon monoxide, ethylene, *oxygen, *gaseous mixture, *thermal conductivity, diffusion, *viscosity, binary system, ternary system, argon, neon, helium;
A3 B3 C8 D1 E1
*hydrogen, *nitrogen, *carbon monoxide, *ethylene, *oxygen, *gaseous, *viscosity;

00605 New modification of solid nitrogen.
Swenson,C.A.
J. Chem. Phys. 23, 1963-64 (1955)
A3 B1 C1 D1 E2 F6 G1 55
*nitrogen, *solidified gas, *PVT data, isotherm, *phase transition property, solid-solid transition, *phase diagram

00610 Thermodynamic temperature scale (TL55) in the liquid helium region.
Van Dijk,H. Durieux,M.
Physica 24, 1-19 (1958) Repr. in Commun. Kamerlingh Onnes Lab. Supl. No. 113c (1958)
A3 B1 C5 D1 E1 F7 G1
*helium, *liquid, *PVT data, *specific heat, *vapor pressure, *boiling temperature, *heat of vaporization, *free energy, saturated vapor, temperature scale, *thermometry

00615 Die reibung, warmeleitung und diffusion in gasmischungen XII. Gasreibung bei hoberen temperaturen. The viscosity, conduction of heat, and diffusion of gas mixtures XII. The viscosity of gases at high temperatures.
Trautz,M. Zink,R.
Ann. Physik 7, 427-52 (1930)
MF No. 78-B A3 B3 C2 D1 E F7 G1 30
*viscosity, thermal conductivity, *air, *nitrogen, *hydrogen, *oxygen, *helium, *neon, *carbon dioxide, *argon, *methane, *viscosity, *gaseous mixture, sulfur dioxide

00616 Computation of thermodynamic properties of compressed gaseous hydrogen based on Joule-Thomson effect measurement.
White,D. Johnston,H.L. Canky,P.
Ohio State Univ. Res. Foundation, Cryogenic Lab., Columbus, Tech. Rept. No. TR 264-21 (Jun 1952) Contr. No. AF W33-038-ac-14794C16243) 16 p 3 tab 2 ref
ASTIA ATI 161 563 A3 B1 C1 D1 E1 F5 G5
*hydrogen, *gas, *joule-thomson coefficient, cryogenic temperature, *thermodynamic property

00617 Untersuchungen uber die Warmeleitfahigkeit der Gase. II. Researches on the thermal conductivity of gas. II
Weber,S.
Ann. Physik 54, 437-62 (1917) 2 fig 17 tab 24 ref
MF No. 90-E A3 B3 C2 D1 E1 F7 G1
pressure, *thermal conductivity, *hydrogen, *helium, *argon, *nitrogen, *methane, *oxygen, carbon monoxide, carbon dioxide, oxide of nitrogen, *neon, *gaseous

00618 Die reibung, warmeleitung und diffusion in gasmichungen. II. Die reibung von H2 - N2 und H2 - CO - gemischen. Viscosities of H2 - N2, and H2 - CO. Mixtures.
Trautz,M. Baumann,P.B.
Ann. Physik 2, 733-36 (1929)
MF No. 84-W A3 B3 C1 D1 E1 F7 G1 29
*hydrogen, *nitrogen, *carbon monoxide, *viscosity, *gaseous mixture, binary syten, diffusion

00619 Critical isotherm and equation of state of liquid-vapor systems.
Widom,B. Rice,O.K.
J. Chem. Phys. 23, 1250-55 (1955) 7 fig 10 ref
A3 B1 C6 D3 E2 F6 G1
*rare gas, xenon, *carbon dioxide, *hydrogen, *gaseous, *critical constants, critical temperature, isotherm, isobar, *PVT data, liquid-vapor equilibrium, *phase equilibrium, *critical region

00622 Zur Kenntnis des Joule-Thomson-Effektes in Wasserstoff. On the knowledge of the Joule-Thomson effect in hydrogen.
Bachr,H.D.
Z. Elektrochem. 59, 32-35 (1955)
CA 49 8647b A3 B3 C7 D1 E1 F7 G1 55
*hydrogen, *gaseous, *joule-thomson coefficient, *specific heat

00625 Equations of state for liquid helium.
Borelius,G.
Arkiv Fysik 13, 369-78 (1958) 5 fig 12 ref
MF No. 49-G A3 B1 C5 D1 E2 F7 G1
*helium, *liquid, *PVT data, *expansivity, thermal expansion, *specific heat, *entropy, saturated liquid, helium I, *equation of state

00626 Equations for the mean specific heat of elemental gases and gas mixtures.
Borger,H.E.A.
J. Sci. Ind. Research (India), 13B, 595-97 (Sep 1954) 3 tab 11 ref
CA 49 9340c MF No. 42-P A3 B1 C2 D1 E1 F7 G1 54
*nitrogen, *oxygen, *water, *carbon dioxide, *gaseous, *specific heat, *gaseous mixture, calculation, equation

00628 Theoretische und experimentelle untersuchungen uber die warmleitfahigkeit von gasgemischen. Theoretical and experimental researches on thermal conductivity of gas mixtures.
Weber,S.
Ann. Physik 54, 481-502 (1917)
MF No. 77-Z A3 B3 C8 D1 E1 F7 G1 17
*hydrogen, *carbon dioxide, *gaseous mixture, *binary system, *thermal conductivity, concentration effect;
A3 B3 C8 D1 E1
*nitrogen, *argon, *gaseous mixture, *binary system, *thermal conductivity, concentration effect

00631 The second virial coefficient of carbon-dioxide at low temperatures
Cook,D.
Can. J. Chem. 35, 268-75 (1957) 4 fig 1 tab 6 ref
MF No. 126-I A3 B' C8 D E F7 G1
*carbon dioxide, *virial coefficient, second virial coefficient, *gaseous

00632 Refractive index of helium 4: liquid.
Edwards,M.H.
Can. J. Phys. 36, 884-98 (1958)
MF No. 49-C A3 B1 C5 D1 E1 F7 G1 58
*helium, *liquid, *refractive index, *gaseous, helium 4, saturated vapor, lambda temperature, thermal expansion

00633 The specific heats of certain gases over wide ranges of pressures and temperatures
Ellenwood,F.O. Kulik,N. Gay,N.R.
Cornell Univ., Ithaca, N.Y. Exptl. Sta. Bull. No. 30, (Oct 1942) 22 pp 11 fig 7 tab 55 ref
A3 B1 C8 D E F8 G5
*ethylene, *gaseous, *specific heat, *air, *hydrogen, *nitrogen, *oxygen, *carbon dioxide, *carbon monoxide, *methane

00634 Pressure - volume - temperature relationships of gaseous hydrogen, nitrogen, and a hydrogen - nitrogen mixture.
Friedman,A.
Ohio State Univ., Columbus, Ph.D. Thesis (1950) 212 pp
MF No. 37-U A3 B1 C6 D1 E1 F9 G7 50
*hydrogen, normal hydrogen, *liquid, *vapor pressure, *nitrogen, saturated liquid, equation;
A3 B1 C6 D1 E1
*hydrogen, *nitrogen, *gaseous, *gaseous mixture, *binary system, *PVT data, compressibility factor, isotherm, *equation of state, second virial coefficient, third virial coefficient, virial coefficient, intermolecular force, lennard-jones function

00636 Density of oxygen.
Germann,A.F.O.
J. Phys. Chem. 19, 477-77 (1915)
CA 9 3006 MF No. 50-O A3 B1 C8 D1 E1 F6 G1 15
*oxygen, *density, *gaseous

00638 La Constante Dielectrique au Voisnage du Point de Fusion. The dielectric constant in the neighborhood of the fusion point.
Guillien,Robert
J. phys. radium 1, No. 8, 29-33 (1940) 7 fig 4 tab 27 ref
CA 34-31459 MF No. 36-P A3 B2 C2 D1 E1 F7 G1
*dielectric constant, *nitrogen, *hydrogen, *melting curve, *oxygen, *liquid, toluene, carbon tetrachloride, carbon disulfide, xylene, solid, temperature effect

00640 Eine neue thermische Zustandsgleichung der Gase und Flussigkeiten. A new thermodynamic equation of state for gases and liquids
Himpan,Joseph
Monatsh. Chem. 84, 787-97 (1953) 5 fig 1 tab 10 ref
CA 48-3740h MF No. 48-U A3 B3 C2 D1 E2 F7 G1
*gaseous, *liquid, *equation of state, *nitrogen, *water, *carbon dioxide, *specific heat, PVT measurements

00645 Condensed gas calorimetry. II. Heat capacity of ortho-deuterium between 13.1 and 23.6 degrees K melting and boiling points, heats of fusion and vaporization. Vapor pressure of liquid ortho-deuterium
Kerr,E.C. Rifkin,E.B. Johnston,H.L. Clarke,J.T.
J. Am. Chem. Soc. 73, 282-4 (1951) 1 fig 6 tab 12 ref
CA 45, 4543d MF No. 159-N A3 B1 C6 D1 E1 F6 G1
*deuterium, orthodeuterium, *liquid, *solidified gas, saturated liquid, *specific heat, *heat of fusion, *heat of vaporization, *vapor pressure, *entropy, temperature effect

00649 Untersuchungen uber das heterogene Gleichgewicht Flussigkeit-Dampf II. Berechnung der Dichten von Flussigkeit und Dampf sowie des erforderlichen Fullungsgrades des Autoklaven beim Arbeiten mit Flussigkeiten bei hohen Temperaturen and hohen Drucken. The heterogeneous equilibrium liquid- vapor I. Calculation of density of liquid and vapors as well as the necessary degrees of filling the autoclave in the work with liquids at high temperatures and pressures
Kordes,E.
Z. Elektrochem. 58, 76-80 (1954)
CA 48, 7367i MF No. 33-S A3 B3 C1 D1 E1 F7 G1
*hydrogen, *acetylene, *density, *liquid, *vapor, *gas, *heterogeneous equilibrium, carbon tetrachloride, octane, sulfur dioxide, phase equilibrium, paraffin

00650 Compressibility of gases. II. The second and third virial coefficients of mixtures of helium and nitrogen at 30 degrees.
Kramer,G.M. Miller,J.G.
J. Phys. Chem. 61, 785-88 (1957)
MF No. 42-U A3 B1 C2 D1 E2 F6 G1 57
*compressibility, *virial coefficient, *gaseous mixture, *helium, *nitrogen, second virial coefficient, third virial coefficient

00652 Celerite du son dans les Gaz sous Pression et Coefficients du Viriel. The velocity of sound in gases under pressure and virial coefficients
Lacam,A. Bergeon,R.
J. recherches centre natl. recherche sci. Lab. Bellevue (Paris) 6, 349-51 (1955) 3 fig 4 ref
MF No. 37-B A3 B2 C2 D1 E1 F7 G1
*velocity of sound, *argon, *nitrogen, *methane, *gaseous, virial coefficient

00654 Warmeleitfahigkeit von Gasgemischen. Thermal conductivity of gas mixtures.
Lehman,Heinz
Chem. Tech. (Berlin) 9, 530-7 (1957)
CA 52, 2484h MF No. 45-T A3 B3 C1 D1 E1 F7 G1
*thermal conductivity, *gaseous, *mixture, *hydrogen, *gas, *nitrogen, *carbon dioxide, *argon, *acetylene, *air, *water, ethanol

00655 Uber schallgeschwindigkeitsmessungen in flussigem argon. The velocity of sound measurements in liquid argon.
Liepmann,H.W.
Helv. Phys. Acta 12, 421-42 (1939)
MF No. 36-U A3 B3 C1 D1 E1 F7 G1 39
*argon, *liquid, *velocity of sound, *nitrogen, *liquid mixture, *binary system

00657 Modern thermodynamics.
Ubbelohde,A.R.
Uspekhi Fiz. Nauk 20, 281-316 (1938)
MF No. 69-T A3 B7 C2 D1 E2 F7 G1
*specific heat, *entropy, mathematical analysis, *free energy, *hydrogen, *hydrogen deuteride, *deuterium, *gaseous

00658 Enthalpien, Entropien und Gleichgewichtskonstanten von Verbrennungsgasen. Enthalpies, entropies and equilibrium constants of gases of combustion
Lutz,O.
Ingr. Arch. 16, 377-82 (1948) 5 tab 124 ref
CA 46-8440b MF No. 34-R A3 B3 C2 D1 E2 F7 G1
*entropy, *enthalpy, *carbon monoxide, *oxygen, *hydrogen, *water, *nitrogen, *carbon dioxide, *gaseous, equilibrium constants, oxide of nitrogen

00660 Development of an equation of state for gases.
Martin,J.J. Hou,Y.C.
A.I.Ch.E. Journal 1, 142-51 (1955)
CA 10692b A3 B1 C8 D1 E3 F6 G1 55
*gaseous, *equation of state, *reduced variable, law of corresponding states, *carbon dioxide, *water, *nitrogen, *inorganic fluid, hydrogen sulfide, *propane, *hydrocarbon, propylene, *organic fluid, benzene

00666 Thermal conductivity of nitrogen from 50 degrees to 500 degrees C and 1 to 100 atmospheres.
Nuttall,R.L. Ginnings,D.C.
J. Res. Natl. Bur. Standards 58, No. 5, 271-78 (1957)
MF No. 42-S A3 B1 C2 D1 E1 F6 G1
*nitrogen, *thermal conductivity, *gaseous

00667 A comparison of the densities of carbon monoxide and oxygen, and the atomic weight of carbon.
Woodhead,M. Whytlaw-Gray,R.
J. Am. Chem. Soc. 1933, 846-54 (1933) 1 fig 4 tab
MF No. 129-K A3 B1 C8 D1 E1 F6 G1
*oxygen, *carbon monoxide, *density, atomic weight, *PVT data, *gaseous, compressibility factor, *carbon, *atomic-molecular property, *apparatus, density, gas

00669 L'equation d'etat des fluides d'apres la theorie cinetique. The equation of state of fluids on the basis of the kinetic theory.
Rocard,Yves
Rev. Sci. 90, 387-418 (1952)
MF No. 49-Q A3 B2 C6 D1 E2 F7 G1 52
*helium, *hydrogen, *nitrogen, *oxygen, *gaseous, *equation of state, virial coefficient, van der waals, *reduced variable, second virial coefficient, intermolecular force, law of corresponding states

00673 Abschatzung Spezifischer Warmen von Gasen aus Dampfdruckkurven. Calculations of the specific heats of gases from vapor pressure curves
Trautz,M. Badstubner,W.
Ann. Physik 8, 185-202 (1931) 17 tab 75 ref
MF No. 89-W A3 B3 C2 D1 E1 F7 G1
*specific heat, *vapor pressure, *hydrocarbon, paraffin class, *methane, *ethane, halogen, *propane, alcohol, *ammonia, organic chemical, *gaseous, aromatic, *water, sulfur dioxide

00676 Thermal conductivity of fluid argon and nitrogen.
Uhlir,Arthur,Jr.
J. Chem. Phys. 20, 463-72 (1952)
CA 46 7385f MF No. 30-B A3 B1 C7 D1 E1 F6 G1
*argon, *liquid, *gaseous, *thermal conductivity, *nitrogen, pressure effect, high pressure, equation, enskogg formula, boiling point to critical point

00678 Application des ultrasons a la mesure de la thermodiffusion dans des melanges gazeux et de la chaleur specifique de l'helium liquide. Application of ultrasonic measurements of thermal diffusion in gas mixtures and the specific heat of gaseous helium at liquid helium temperatures.
Van Itterbeek,A.
Bull. IIR Annexe 1955-2, 99-106 (Presented at meeting of Comm. 1 and 2, Grenoble, Sept 24-26, 1954)
MF No. 30-P A3 B2 C5 D1 E1 F7 G2
*helium, *gaseous, *velocity of sound, *specific heat, pressure effect, *binary system, *gaseous mixture, *hydrogen, *nitrogen

00680 Velocity of sound in liquid nitrogen.
Van Itterbeek,A. De Bock,A. Verhaegen,L.
Physica 15, No. 7, 624-26 (1949)
CA 44-3996f MF No. 44-T A3 B1 C1 D1 F6 G1 49
*nitrogen, *liquid, *methane, *oxygen, *velocity of sound, *compressibility

00682 Velocity of sound in liquid oxygen.
Van Itterbeek,A. De Bock,A.
Physica 14, No. 8, 542-44 (Dec 1948)
MF No. 37-P A3 B1 C1 D1 E1 F6 G1 48
*oxygen, *velocity of sound, *liquid, carbon tetrachloride, helium I, helium II

00685 Uber Wahrscheinliche Werte von Cv fur Wasserdampf, Ammoniak, Methan und Hohere Paraffine. Probable values of Cv from water vapor, NH3, methane, and higher paraffins
Trautz,Max
Ann. Physik 9, 465-85 (1931) 1 fig 4 tab 6 ref
MF No. 89-V A3 B3 C1 D1 E1 F7 G1
*water, *ammonia, *methane, paraffin, *hydrocarbon, *specific heat, *gaseous, *liquid

00686 The thermal conductivity of solid helium
Webb,F.J. Wilkinson,K.R. Wilks,J.
Proc. Roy. Soc. (London) A214, 546-63 (Oct 1952) 9 fig 1 tab 37 ref
MF No. 26-R A3 B1 C5 D1 E1 F6 G1
*thermal conductivity, *helium, density, *solidified gas

00688 Intermolecular potentials of argon, krypton, and xenon.
Whalley,E. Schneider,W.G.
J. Chem. Phys. 23, 1644-50 (1955)
CA 59 630c MF No. 48-H A3 B1 C1 D1 E1 F6 G1 55
*argon. krypton, xenon, second virial coefficient, crystal;
A4 B1 C1 D1 E1
*argon, krypton, xenon, crystal, intermolecular force

00690 Densities and molecular weights of neon and helium.
Watson,H.E.
J. Chem. Soc. 97, 810-33 (1910)
MF No. 76-K A3 B1 C1 D1 E1 F7 G1
*density, *neon, *helium, molecular weight, atomic weight, *physical property, *gaseous

00691 Measurements of the velocity of sound in helium gas at temperatures obtained with liquid helium.
Keesom,W.H. Van Itterbeek,A.
Proc. Acad. Sci. Amsterdam 34, 204-09 (1931) and Commun. Phys. Lab. Univ. Leiden No. 213G
MF No. 43-Z A3 B1 C5 D1 E1 F7 G1 31
*velocity of sound, *helium, *gaseous

00692 Determination of the ratio of the specific heats of helium gas at the boiling point of oxygen, by means of the velocity of sound.
Keesom,W.H. Van Itterbeek,A.
Proc. Acad. Sci. Amsterdam 33, 440-46 (1930)
MF No. 44-A A3 B1 C1 D2 E2 F7 G1
*helium, *gaseous, *specific heat, *velocity of sound, specific heat ratio

00693 Pressure dependence of the coefficient of heat conductivity for the gases helium and hydrogen at low temperatures.
Ubbink,J.B.
Commun. Kamerlingh Onnes Lab. Univ. Leiden No. 274 a (1948) (Repr. from: Physica 13, 659-68, Dec 1947)
CA 1227 MF No. 78-C A3 B1 C5 D1 E1 F7 G1 48
*hydrogen, *helium, pressure effect, *thermal conductivity, *gaseous;
A6 B1 C5 D1 E1
*heat conduction, *heat transport, hydrogen, helium, *pressure effect, convection

00694 Thermodynamic properties of hydrocarbons
Edmister,W.C.
Ind. Eng. Chem. 30, 352-58 (1938) 1 fig 4 tab 37 ref
MF No. 87-M A3 B1 C2 D2 E2 F6 G1
*critical constant, *thermodynamic property, *specific heat, *entropy, *enthalpy, *methane, *ethane, *propane, *butane, *hydrocarbon, reduced variable, *gaseous

00695 Thermal conduction in gases
Vines,R.G.
Proc. Conf. Thermodynamic and Transport Properties Fluids, London, 1957, 120-23 (1958) 2 tab 16 ref
MF No. 72-U A3 B1 C2 D1 E2 F9 G9
*hydrogen, *nitrogen, *water, *propane, *argon, xenon, *gaseous, *hydrocarbon, krypton, *organic fluid, *thermal conductivity, *oxygen, *methane, *transport property

00700 Some physical properties of air and its components
Nason,W.C.Jr.
Mass. Inst. Technol. Cambridge, Rept. Aero Medical Lab., Wright Field, Dayton, Ohio, Contr. W33-038 AC-2031, 18 pp 12 fig 15 ref
A3 B1 C1 D1 E1 F8 G5
*air, *carbon dioxide, *nitrogen, *oxygen, *hydrogen, *helium, *specific heat, *density, *boiling point, *critical constants, *viscosity, *vapor pressure, *melting point, *liquid, *gaseous

00704 The thermal conductivity of liquid nitrogen between 65 and 90 degrees K.
Powers,R.W. Mattox,R.W. Johnston,H.L.
Ohio State Univ., Cryogenic Lab. Columbus, Tech. Rept. No. TR 264-9 (1954) Contr. No. W33-038-ac-14794(16243) 16 pp 4 fig 2 tab 6 ref
ASTIA ATI 105 926 A3 B1 C7 D1 E1 F5 G5
*thermal conductivity, *nitrogen, *liquid, temperature effect

00710 The velocity of sound in helium at -78 degrees C to 200 degrees C and pressures up to 70 atmospheres.
Schneider,W.G. Thiessen,G.T.
Can. J. Res. A28, 509-19 (1950)
MF No. 44-R A3 B1 C8 D1 E1 F6 G1
*velocity of sound, *helium, *virial coefficient, second virial coefficient, *specific heat, high pressure, *gaseous, specific heat ratio

00712 Solid methane-Changes in phase under pressure.
Stevenson,Richard
J. Chem. Phys. 27, No. 3, 656-58 (Sept 1957) 4 fig 3 ref
MF No. 178-M A3 B1 C5 D3 E1 F6 G1
*methane, *deutero-compound, deutero methane, *phase transition property, solid-solid transition, pressure effect, *phase diagram, temperature effect, *solidified gas

00714 A comparative study of accommodation coefficients by the temperature jump and low-pressure methods and thermal conductivities of He, Ne, and CO2
Thomas,L.B. Golike,R.C.
J. Chem. Phys. 22, 300-05 (1954) 3 fig 5 tab 11 ref
MF No. 78-X A3 B1 C2 D1 E1 F6 G1
*helium, *neon, *carbon dioxide, *accommodation coefficient, low pressure, *thermal conductivity, *gaseous, platinum, thermocouple, *measurement equipment, vacuum, pyrex, gas

00717 An experimental determination of the thermal conductivity of liquid oxygen.
Tsederberg,N.V. Timrot,D.L.
Soviet Phys. Tech. Phys. 1, 1791-7 (1956) 4 fig 4 tab 15 ref (Trans. from Zhur. Tekh. Fiz. 26, 1849-56, 1956)
MF No. 66-Q A3 B1 C7 D1 E1 F6 G1
*oxygen, *liquid, *gaseous, *thermal conductivity, temperature effect

00720 Measurements about the velocity of sound in hydrogen gas at liquid hydrogen temperatures.
Van Itterbeek,A. Keesom,W.H.
Proc. Acad. Sci. Amsterdam 34, 988-95 (1931) Communs. Kamerlingh Onnes Lab. Univ. Leiden No. 216C
MF No. 43-X A3 B1 C6 D1 E1 F7 G1 31
*hydrogen, *gaseous, *velocity of sound, specific heat, entropy

00721 Measurements on the velocity of sound in N2 under high pressure.
Van Itterbeek,A. DeRop,W. Forrez,G.
Appl. Sci. Research 6, 421-32 (1957)
MF No. 39-W A3 B1 C1 D1 E1 F7 G1 57
*nitrogen, *velocity of sound, high pressure, equation of state, *gaseous, virial coefficient, specific heat ratio, *specific heat

00724 Thermal conductivities of gases at low pressures. I. Monatomic gases, helium and argon.
Waelbroeck,F.G. Zuckerbrodt,P.
J. Chem. Phys. 28, 523-24 (1958)
MF No. 51-W A3 B1 C2 D1 E F6 G1
pressure, *thermal conductivity, *hydrogen, *helium, *oxygen, *air, *argon, *carbon dioxide, *gaseous

00727 Low pressure P-V-T data of gaseous hydrogen from the boiling point to room temperature.
White,D. Friedman,A.S. Johnston,H.L.
Ohio State Univ. Res. Foundation, Cryogenic Lab., Columbus, Rept. No. TR 264-12 (1951) Contr. No. W33-038-ac-14794(16243) 23 pp
ASTIA ATI 162 583 A3 B1 C6 D1 E1 F5 G5
*PVT data, *equation of state, *hydrogen, *gaseous, isotherm, lennard jones function, intermolecular force, low pressure, second virial coefficient, virial coefficient

00728 The thermodynamic properties of liquid normal hydrogen between the boiling point and the critical point and up to 150 atmospheres pressure.
White,D. Johnston,H.L.
Ohio State Univ. Cryogenic Lab., Columbus, Rept. No. TR 264-23 (Feb 1953) Contr. No. W33-038 ac 14794, 10 p 6 tab 1 ref
ASTIA AD 6234 A3 B1 C6 D1 E3 F5 G5 53
*hydrogen, normal hydrogen, *density, *expansivity, thermal expansion, *compressibility, *entropy, *enthalpy, *specific heat, calculation

00734 The entropy diagram for helium at low temperatures.
Zelmanov,J.L.
J. Phys. (U.S.S.R.) 8, 135-41 (1944)
A3 B1 C5 D1 E1 F7 G1 44
*entropy, *helium, *liquid, *gaseous, T-S diagram

00736 Specific heat and enthalpy of helium at low temperatures.
Zelmanov,J.L.
J. Phys. U.S.S.R. 8, No. 3, 129-34 (1944)
MF No. 51-L A3 B1 C5 D1 E1 F7 G1
*specific heat, *enthalpy, *helium, *gaseous, *joule-thomson coefficient, pressure effect, temperature effect

00737 L'etude de la Courbe des Densities a Basse Temperature au Laborntoire Cryogene de Leiden. Study of density curves at low temperatures.
Mathias,E.
THE PHYSICAL LABORATORY AT THE STATE UNIVERSITY OF LEIDEN IN THE YEARS 1904-1922, Eduard Ijdo Publishing Co., Leiden (1922) 165-96, 5 fig 16 tab 27 ref
MF No. 55-U A3 B2 C1 D1 E1 F7 G2
*density, *liquid, *oxygen, *argon, *nitrogen, *hydrogen, *helium, *hydrocarbon, *critical constant, *neon, methane, carbon monoxide, law of rectilinear diameters

00738 Thermodynamical properties of nitrogen as functions of density and temperature between -125 degrees and 150 degrees C and densities up to 760 emagat.
Michels,A. Lunbeck,R.J. Wolkers,G.J.
Physica 17, No. 9, 801-16 (1951)
CA 46 2360i MF No. 29-Z A3 B1 C8 D1 E3 F6 G1
*nitrogen, *PVT data, calculation, compressibility factor, *internal energy, *entropy, *gaseous, *enthalpy, *free energy, *specific heat, *velocity of sound

00740 The heat capacity of liquid para-hydrogen from the boiling point to the critical point.
Smith,A.L. Hallett,N.C. Johnston,H.L.
Ohio State Univ., Cryogenic Lab., Columbus, Rept. No. TR 264-15 (n.d.) Contr. No. W33-038 ac 14794 (16243)
A3 B1 C6 D1 E1 F5 G5
*specific heat, *para-hydrogen, *boiling temperature, *hydrogen, *critical point, *liquid, boiling point to critical point

00746 The NBS-NACA tables of thermal properties of gases. Table 7.10. Molecular hydrogen (Ideal gas state).
Woolley,H.W.
Natl. Bur. Standards, Heat and Power Div., Table 7.10 (Jul 1949)
A3 B1 C6 D1 E2 F2 G6
*hydrogen, *specific heat, *entropy, *enthalpy, compilation, tables, *gaseous

00749 Thermal conductivity in elemental semiconductors and solid argon.
White,G.K. Woods,S.B. MacDonald,D.K.C.
Bull. IIR Annexe 1956-2, 91-95 (Presented at Meeting of Comm. 1 & 2, Louvain, Sept. 4-7, 1956)
A2 B1 C5 D1 E1 F7 G2
*carbon, diamond, *bismuth, *germanium, *silicon, *thermal conductivity, temperature effect, *argon, *solidified gas

00750 Thermal conductivity of the solidified inert gases: Argon, neon, and krypton.
White,G.K. Woods,S.B.
Phil. Mag. 3, 785-97 (1958)
A3 B1 C5 D1 E1 F6 G1 58
*rare gas, *thermal conductivity, *argon, *neon, *krypton, *solidified gas, lattice parameter

00756 Thermal conductivity of condensed gases. III. The thermal conductivity of liquid deuterium from 19 to 26 degrees K.
Powers,R.W. Mattox,R.W. Johnston,H.L.
J. Am. Chem. Soc. 76, 5974 (Dec 1954)
A3 B1 C6 D1 E1 F6 G1
*thermal conductivity, *deuterium, *liquid, equation, temperature effect

00757 Thermal properties of gases, Table 19.42. Argon, thermal conductivity.
Nuttall,R.L.
Natl. Bur. Standards, Heat and Power Div. Table 19.42 (n.d.) 4 ref
A3 B1 C1 D1 E2 F2 G9
*argon, *thermal conductivity, *gaseous

00759 Thermal properties of gases. Table 11.42. Molecular nitrogen.
Nuttall,R.L.
Natl. Bur. Standards, Heat and Power Div., Table 11.42 (n.d.)
A3 B1 C7 D1 E2 F2 G9 00
*nitrogen, *gaseous, *thermal conductivity

00760 Thermal properties of gases, Table 9.42. Molecular oxygen, thermal conductivity.
Nuttall,R.L.
Natl. Bur. Standards, Heat and Power Div. Table 9.42 (1955)
A3 B1 C1 D1 E2 F2 G9
*oxygen, *thermal conductivity, *gaseous

00765 The NBS-NACA tables of thermal properties of gases. Table 7.42. Molecular hydrogen.
Nuttall,R.L.
Natl. Bur. Standards Heat and Power Div., Table 7.42 (Dec 1950)
A3 B1 C6 D1 E2 F2 G9 50
*hydrogen, *thermal conductivity, *gaseous

00775 The NBS-NACA tables of thermal properties of gases. Table 13.18 density of carbon dioxide
Masi,J.F.
Natl. Bur. Standards, Heat & Power Div., Table 13.18 (Jul 1950) 9 pp 4 ref
A3 B1 C1 D1 E2 F2 G6
*carbon dioxide, *density, *gaseous, table

00776 Thermodynamic properties of helium at low temperatures and high pressures.
Mann,D.B. Stewart,R.B.
Natl. Bur. Standards Tech. Note Note No. 3, (May 1959) 39 pp 14 fig 3 tab 15 ref
A3 B1 C5 D1 E2 F3 G5 59
*helium, *thermodynamic property, *entropy, *enthalpy, *gaseous, *liquid, T-S diagram

00781 Physical properties of freon-family of fluorinated compounds.
Kinetic Chemicals, Inc., Wilmington, Del.
A3 B1 C2 D1 E2 F6 G2
*critical constant, *thermal property, *physical property, table, freon, fluorinated hydrocarbon

00782 The compressibility of helium gas between 2.6 degrees and 4.2 degrees K.
Keesom,W.H. Kraak,N.H.
Comruns. Kamerlingh Onnes Lab. Univ. Leiden 17, No. 234e, 1 (1935)
MF No. 122-L A3 B1 C5 D1 E1 F7 G1
*helium, *gaseous, *equation of state, virial coefficient, *PVT data, isotherm, compressibility factor

00784 Thermal conductivity chart for gases
Johnson,A.I. Huang,C.J.
Chem. Eng. 61, No. 2, 204-5 (1954) 1 fig 1 tab
MF No. 72-L A3 B1 C2 D1 E2 F6 G1
*thermal conductivity, *gaseous, *air, *oxygen, *methane, *propane, ethylene, sulfur dioxide, water vapor, viscosity, specific heat, nomogram

00787 Eine Bestimmung der Dampfdruck und Dichtekurven des Sauerstoffs und Konstruktion eines Apparates zur Bestimmung kritischer Daten. A determination of vapor-pressure and density curves of oxygen and the construction of an epparatus for determining critical data
Germann,F.E.E.
Physik. Z. 14, 657-60 (Jan 1913)
A3 B3 C1 D1 E1 F7 G1
*oxygen, *vapor pressure, *density, *liquid, experimental procedure

00790 Cooling equipment design study. The thermodynamics of oxygen, hydrazine and fluorine.
Fricke,E.F.
Republic Aviation Corp., New York, Rept. F-5028-101 (n.d.)
Contr. No. W33-038-AC 18191, 120 pp
ASTIA ATI 121 150 A3 B1 C7 D1 E2 F5 G5
*oxygen, *fluorine, *specific heat, *enthalpy, *entropy, *physical property, *liquid, *atomic molecular property, *organic fluid, hydrazine, *free energy, critical constant

00791 Zahigkeit und molekularer wirkungsdurchmesser des flors. Viscosity and molecular working diameter by measurement of fluorine.
Franck,E.U. Stober,W.
Z. Naturforsch. 7A, 822 (1952)
A3 B3 C1 D1 E1 F7 G1
*fluorine, *viscosity, *argon, *gaseous, *atomic-molecular property, nitrogen, oxygen, fluorine, chlorine, bromine, temperature effect

00796 The equation of state of solid helium
Dugdale,J.S.
Nuovo Cimento Suppl. 9, No. 1, 27-31 (1958) 2 fig 1 tab 11 ref
A3 B1 C5 D1 E1 F7 G1
*helium, *equation of state, *solidified gas

00799 Die dampfdruckkonstante des neons. The vapor pressure of neon.
Clusius,K.
Z. physik. Chem. (Leipzig) B4, 1-13 (1929)
MF No. 70-P A3 B3 C6 D1 E1 F7 G1 29
*neon, *specific heat, *vapor pressure, *solidfied gas

00800 Compressibilite et dilatabilite des gaz. Compressibility and expansivity of gas.
Leduc,A.
Ann. phys. 9, 1-28 (1918)
MF No. 83-L A3 B2 C8 D1 E1 F7 G1
*neon, *argon, *compressibility, *expansivity, *gaseous, *density

00801 Uber die Isothermen einiger Gase zwischen 400 degrees und -183 degrees. On the isotherms of various gases between 400 degrees and -183 degrees.
Holborn,L. Otto,J.
Z. Physik 33, 1-11 (1925) 6 tab 4 ref
MF No. 78-Y A3 B3 C8 D1 E1 F7 G1
*nitrogen, *air, *hydrogen, *neon, *helium, virial coefficient, isotherm, *argon, *gaseous, *PVT data, compressibility factor, second virial coefficient, third virial coefficient, temperature effect

00802 Studies on fluorine at low temperatures. VIII. Determination of molecular heat, heat of fusion of condensed fluorine and the entropy of fluorine.
Kanda,Eizo
Bull. Chem. Soc. Japan 12, No. 12, 511-20 (1937)
MF No. 47-B A3 B1 C1 D1 E1 F7 G1
*fluorine, *specific heat, *heat of fusion, *entropy, *melting temperature

00810 Schmelzdiagramme einiger binarer systeme aus kondensierten gasen. Melting diagrams of several binary systems of condensed gases.
Veith,H. Schroder,E.
Z. physik. Chem. A179, No. 1, 16-22 (1937)
MF No. 59-K A3 B3 C1 D1 E1 F7 G1
krypton, *methane, *argon, *nitrogen, *gaseous mixture, melting point, *melting curve, *binary system

00812 The velocity of sound in liquid helium under pressure.
Findlay,J.C. Pitt,A. Smith,H. Wilhelm,J.O.
Phys. Rev. 56, 122 (1939)
MF No. 44-E A3 B1 C5 D1 E1 F6 G1 39
*helium, *liquid, *velocity of sound, pressure effect

00817 Properties of helium three at low temperatures.
Daunt,J.G.
Advances in Phys. 1, 209-68 (Apr 1952) 27 fig 10 tab 104 ref
MF No. 160-N A3 B1 C5 D1 E2 F6 G1
*melting curve, critical temperature, *entropy, superfluid, *helium, *liquid, *solidified gas, helium 3, enrichment, *vapor pressure, *density, *heat of vaporization, second order transition, helium 4, helium 3-helium 4, *liquid mixture, *binary system, *phase equilibrium, second sound, lambda temperature, *solution

00821 The thermal conductivities of nitrogen and argon in the liquid and gaseous states.
Burton,J.T.A. Ziebland,H.
Gt. Brit. Ministry of Supply, Rept. No. E.R.D.E. 11/R/57 (Oct 1957) 15 pp 2 fig 5 tab 13 ref
ASTIA AD 145 956 A3 B1 C7 D E F5 G5
*nitrogen, *argon, *gaseous, *liquid, *thermal conductivity

00826 The velocity of sound in liquid helium.
Findlay,J.C. Pitt,A. Smith,H. Wilhelm,J.O.
Phys. Rev. 54, 506-09 (1938)
MF No. 44-D A3 B1 C5 D1 E1 F6 G1 38
*helium, *liquid, *velocity of sound, saturated liquid, *compressibility

00832 The NBS-NACA tables of thermal properties of gases. Table 13.10
Woolley,H.W.
Natl. Bur. Standards, Heat & Power Div., Table 13.10 (Jul 1950) 4 pp 3 ref
A3 B1 C7 D1 E2 F2 G6
*carbon dioxide, *specific heat, *entropy, *enthalpy, *gaseous, compilation, tables

00833 The NBS-NACA tables of thermal properties of gases. Table 19.10.
Woolley,H.W.
Natl. Bur. Standards, Heat and Power Div., Table 19.10 (Dec 1949)
A3 B1 C2 D1 E2 F2 G9
*argon, *specific heat, *enthalpy, *entropy, *gaseous, tables

00836 Isotherms of helium between 0 degrees and 150 degrees C up to 200 amagat.
Michels,A. Wouters,H.
Physica 8, No. 8, 923-32 (1941)
MF No. 123-W A3 B1 C8 D1 E1 F6 G1
*helium, *gaseous, *PVT data, compressibility factor, isotherm, virial coefficient, second virial coefficient, third virial coefficient, internal energy

00837 Ultrasonic propagation in liquid helium.
Chase,C.E.
Am. J. Phys. 24, 136-55 (Mar 1956)
A3 B1 C4 D1 E1 F6 G1 56
frequency effect, *physical property, sound absorption, *velocity of sound, *liquid, *helium, lambda temperature

00840 The NBS-NACA tables of thermal properties of gases. Table 12.10. Atomic nitrogen (Ideal gas state).
Woolley,H.W.
Natl. Bur. Standards, Heat and Power Div., Table 12.10 (Jul 1950)
A3 B1 C6 D1 E2 F2 G9
*nitrogen, *specific heat, *entropy, *enthalpy, atomic, compilation, tables, *gaseous

00842 Thermal properties of gases, table 11.10. Molecular nitrogen (Ideal gas state)
Woolley,H.W.
Natl. Bur. Standards, Heat & Power Div., Table No. 11.10 (Jul 1949) 4 ref
A3 B1 C6 D1 E2 F2 G9
*nitrogen, *specific heat, *entropy, *enthalpy, compilation, tables

00844 The NBS-NACA tables of thermal properties of gases. Table 10.10. Atomic oxygen (Ideal gas state).
Woolley,H.W.
Natl. Bur. Standards, Heat and Power Div., Table 10.10 (Dec 1949)
A3 B1 C6 D1 E2 F2 G9
*oxygen, *specific heat, *entropy, *enthalpy, atomic, compilation, tables, *gaseous

00846 The NBS-NACA tables of thermal properties of gases, table 9.10. Molecular oxygen (Ideal gas state)
Woolley,H.W.
Natl. Bur. Standards, Heat & Power Div., Table No. 9.10 (Jul 1949) 2 ref
A3 B1 C6 D1 E2 F2 G9
*oxygen, *specific heat, *entropy, *enthalpy, compilation, tables, *gaseous

00848 The NBS-NACA tables of thermal properties of gases. Table 8.10. Atomic hydrogen (Ideal gas state).
Woolley,H.W.
Natl. Bur. Standards, Heat and Power Div., Table 8.10 (1949)
A3 B1 C2 D1 E2 F2 G9
*hydrogen, *specific heat, *enthalpy, *entropy, gaseous, tables

00849 The NBS-NACA tables of thermal properties of gases. Table 7.39. Molecular hydrogen.
Woolley,H.W.
Natl. Bur. Standards, Heat and Power Div., Table 7.39 (Dec 1950)
A3 B1 C1 D1 E2 F2 G9
*hydrogen, *specific heat, *enthalpy, *entropy, compilation, tables, *gaseous

00850 The NBS-NACA tables of thermal properties of gases. Table 7.32. Molecular hydrogen.
Woolley,H.W.
Natl. Bur. Standards, Heat and Power Div., Table 7.32 (Jul 1950)
A3 B1 C2 D1 E2 F2 G9
*hydrogen, *specific heat, *enthalpy, *entropy, compilation, tables, *gaseous

00852 The NBS-NACA table of thermal properties of gases. Table 7.18. Density of molecular hydrogen.
Woolley,H.W.
Natl. Bur. Standards, Heat and Power Div., Table 7.18 (Dec 1949) 3 pp 1 ref
A3 B1 C2 D1 E2 F2 G9
*hydrogen, *density, *gaseous, compilation, tables

00853 The NBS-NACA tables of thermal properties of gases. Table 7.20. (Compressibility factor for molecular hydrogen).
Woolley,H.W.
Natl. Bur. Standards, Heat and Power Div., Table 7.20 (Dec 1949)
A3 B1 C6 D1 E2 F2 G9 49
*hydrogen, compressibility factor, *gaseous, *PVT data, compilation, tables

00854 Thermal properties of gases, table 7.22, molecular hydrogen.
Woolley,H.W.
Natl. Bur. Standards, Heat and Power Div. Table No. 7.22 (Jul 1949)
A3 B1 C7 D1 E2 F2 G9 49
*hydrogen, *entropy, *enthalpy, *gaseous, compilation, tables

00855 The NBS-NACA tables of thermal properties of gases. Table 7.24. Molecular hydrogen.
Woolley,H.W.
Natl. Bur. Standards, Heat and Power Div., Table 7.24 (Jul 1950)
A3 B1 C6 D1 E2 F2 G9
*hydrogen, *specific heat, compilation, tables, *gaseous

00856 The NBS-NACA tables of thermal properties of gases. Table 7.26. Molecular hydrogen.
Woolley,H.W.
Natl. Bur. Standards, Heat and Power Div., Table 7.26 (Jul 1950)
A3 B1 C1 D1 E2 F2 G9
*hydrogen, *specific heat, *enthalpy, *entropy, *molecular property, tables, *gaseous

00857 Thermal conductivity of binary and ternary rare gas mixtures.
Srivastava,B.N. Saxena,S.C.
Proc. Phys. Soc. (London) B70, 369-78 (1957)
MF No. 512-N A3 B1 C2 D1 E1 F6 G1 57
*thermal conductivity, *binary system, *ternary system, *argon, *neon, *krypton, *gaseous mixture

00877 Entropy and specific heat of liquid He3
Singvi,K.S.
Phys. Rev. 87, 540-41 (Aug 1952) 1 fig 1 tab 11 ref
MF No. 159-Z A3 B1 C4 D1 E3 F6 G1
*helium, *liquid, *viscosity, *entropy, *specific heat, helium I

00902 Thermodynamic properties of liquid helium three. I. The specific heat and entropy.
Roberts,T.R. Sydoriak,S.G.
Phys. Rev. 98, 1672-78 (Jun 1955)
A3 B1 C4 D1 E1 F6 G1 55
*helium, *liquid, *specific heat, *entropy, equation, anomaly

00903 Coefficient of viscosity of gases and gas mixtures at low temperatures.
Rietveld,A.O.
Bull. IIR Annexe 1956-2, 173-80 (Presented at Meeting of Comm. 1 & 2, Louvain, Sept. 4-7, 1956) 5 fig 10 ref
MF No. 169-C A3 B1 C7 D3 E1 F7 G2
*argon, *helium, *gaseous, *gaseous mixture, *binary system, *viscosity, concentration effect, *neon

00924 Liquid-vapor phase behavior of the methane-nitrogen system.
Bloomer,O.T. Parent,J.D.
Chem. Eng. Progr. 49, No. 6, 11-24 (1953)
MF No. 77-F A3 B1 C1 D1 E1 F6 G1
*binary system, *mixture, *PVT data, *methane, *nitrogen, cryogenic temperature, critical region, phase-equilibrium

00926 Formula for the thermal conductivity of liquids.
Borovik,E.S.
Zhur. Eksptl. i Teoret. Fiz. 18, 48-51 (1948) 1 fig 2 tab 19 ref
MF No. 72-G A3 B7 C7 D1 E3 F7 G1
*liquid, *thermal conductivity, *water, *nitrogen, theory

00927 Thermal conductivity of liquid nitrogen, carbon monoxide, methane, and ethylene.
Borovik,E.S. Mamveev,A. Panina,Ye.
Zhur. Tekh. Fiz. 10, No. 12, 988-998 (1940) 5 fig 4 tab 7 ref (trans. avail. OTS, No. 61-18111, $1.10)
MF No. 35-U A3 B7 C7 D3 E1 F7 G1 40
*nitrogen, *liquid, carbon monoxide, *methane, *ethylene, temperature effect, *thermal conductivity

00932 The thermal conductivity of liquid helium I.
Bowers,R.
Proc. Phys. Soc. (London) A65, 511-18 (Jul 1952)
MF No. 79-V A3 B1 C5 D E1 F6 G1
*helium, *liquid, *thermal conductivity, temperature effect

00935 Heat conductivity of liquid helium I.
Bowers,R. Mendelssohn,K.
Nature 167, 111 (Jan 1951)
A3 B1 C5 D E1 F7 G1
*helium, helium I, *liquid, *thermal conductivity, temperature effect, lambda temperature

00938 The viscosity of liquid helium between 2 and 5 degrees K.
Bowers,R. Mendelssohn,K.
Proc. Roy. Soc. (London) A204, 366-74 (Dec 1950)
A3 B1 C1 D E F6 G1
*helium, *liquid, *viscosity, lambda temperature

00940 Viscosity-reduced state correlation for diatomic gases.
Brebach,W.J. Thodos,G.
Ind. Eng. Chem. 50, No. 7, 1095-1100 (1958) 10 fig 4 tab 75 ref
A3 B1 C7 D1 E3 F6 G1
*gaseous, *viscosity, *reduced variable, *critical constant, *carbon monoxide, *fluorine, *hydrogen, *nitrogen, *oxygen, *argon, *helium, *neon, *methane, *air, *gaseous mixture, *binary system

00942 The entropy of superfluid helium.
Brewer,D.F. Edwards,D.O. Mendelssohn,K.
Proc. Phys. Soc. (London) A68, 939-40 (Oct 1955)
A3 B1 C5 D E3 F6 G1 55
*helium, *liquid, superfluid, *entropy, helium II

00944 Anomalous surface tension in helium II.
Brewer,D.F. Mendelssohn,K.
Phil. Mag. 44, 559-61 (May 1953)
A3 B1 C5 D E1 F6 G1 53
*helium, *liquid, *surface tension, helium II, anomaly

00948 Viscosity of helium I and helium I.
Burton,E.F.
Nature 135, 265 (1935)
MF No. 38-E A3 B1 C1 D1 E1 F7 G1
*transport property, *viscosity, *helium, *liquid, helium I, helium I

00949 Thermodynamic properties of deuterium calculated from Joule-Thomson effects.
Cemky,P. White,D. Johnston,H.L.
Ohio State Univ. Res. Foundation, Cryogenic Lab., Columbus, Tech. Rept. 436-6 (Oct 1953) Contr. SC-4W-7405 Eng 36, 17 pp
ASTIA AD 28801 A3 B1 C1 D1 E1 F5 G5
*thermodynamic property, *deuterium, *enthalpy, *specific heat, *entropy, joule-thomson cooling

00950 Joule-Thomson effects in deuterium.
Cemky,P. White,D. Johnston,H.
Ohio State Univ. Res. Foundation, Cryogenic Lab., Columbus, Tech. Rept. 436-5 (1953) Contr. No. SC-4, W-7405, Eng. 36, 10 pp
ASTIA AD 28802 A3 B1 C1 D1 E1 F5 G5
*deuterium, *enthalpy, coolant, nitrogen, air, oxygen, freon, joule-thomson cooling

00952 Ultrasonic measurements in liquid helium.
Chase,C.E.
Phys. Rev. 91, 489 (Jul 1953) 7 fig 1 tab 20 ref
A3 B1 C5 D E1 F6 G1 53
*velocity of sound, *liquid, *helium, sound absorption

00953 Ultrasonic measurements in liquid helium.
Chase,C.E.
Proc. Roy. Soc. (London) A220, 116-132 (Oct 1953) 7 fig 1 tab 20 ref
MF No. 43-U A3 B1 C4 D1 E1 F6 G1 53
physical property, frequency effect, sound absorption, *liquid, *velocity of sound, *helium, lambda temperature

00954 Ultrasonic propagation in magnetically cooled helium.
Chase,C.E. Herlin,M.A.
Phys. Rev. 97, 1447-52 (Mar 1955)
A3 B1 C4 D E1 F6 G1 55
*velocity of sound, *helium, *liquid

00955 Ultrasonic measurements in magnetically cooled liquid helium.
Chase,C.E. Herlin,M.A.
Phys. Rev. 99, 699 (Jul 1955)
A3 B1 C4 D E1 F6 G1 55
*velocity of sound, *helium, *liquid

00962 Measurements on the thermal diffusion of Ne2-H2, Ne-D2, and Ne-He mixtures at liquid hydrogen temperatures.
De Troyer,A. van Itterbeek,A. van den Berg,G.J.
Physica 16, 669-77 (Sept 1950)
A3 B1 C8 D1 E1 F6 G1 50
*neon, *helium, *gaseous mixture, *viscosity, thermal diffusion, concentration effect, *binary system;
A3 B1 C8 D1 E1
*neon, *hydrogen, *gaseous mixture, *viscosity, thermal diffusion, concentration effect, *binary system;
A3 B1 C8 D1 E1
*neon, *deuterium, *gaseous mixture, *viscosity, thermal diffusion, concentraton effect, *binary system

00982 Hydrodynamics of oscillating discs in viscous fluids. Density and viscosity of normal fluid in pure He4 from 1.2 degrees K to the lambda point.
Dash,J.G. Taylor,R.D.
Phys. Rev. 105, 7-24 (Jan 1957)
A3 B1 C5 D3 E1 F6 G1 57
*helium, *liquid, helium 4, helium I, *density, *viscosity

00983 The use of thermodynamic diagrams in the study of industrial oxygen production.
Dascalescu,A.
Rev. chim. (Bucharest) 7, No. 1, 12-30 (1956) 21 fig 2 tab 14 ref
MF No. 47-P A3 B9 C7 D1 E2 F7 G1 56
*air, *PVT data, compressibility factor, *specific heat, *entropy, T-S diagram, *enthalpy, *nitrogen, *gaseous;
A6 B9 C7 D1 E2
*production, T-S diagram, throttling, *air, *nitrogen, *oxygen, liquefaction, flow chart, compression, expansion, heat

00984 Thermodynamic properties of butane, isobutane and propane
Dana,L.I. Jenkins,A.C. Burdick,J.N. Tizm,R.C.
Refrig. Eng. 12, 387-405 (1926) 20 fig 13 tab 13 ref
MF No. 88-Q A3 B1 C8 D1 E1 F6 G1
*butane, *propane, *liquid, *ethane, *density, *entropy, *gaseous, *vapor pressure, *heat of vaporization, *specific heat, saturated liquid, saturated vapor, *enthalpy, *PVT data

00985 The latent heat of vaporization of liquid oxygen-nitrogen mixtures
Dana,L.I.
Proc. Am. Acad. Arts Sci. 60, No. 4, 239-67 (Oct 1925) 7 fig 9 tab 20 ref
MF No. 83-D A3 B1 C1 D1 E2 F6 G1
*oxygen, *nitrogen, *binary system, *heat of vaporization, *liquid mixture

00986 Solidification curve of helium II.
Cwilong,B.M.
Phys. Rev. 68, 1435 (1952) 2 fig 1 ref
MF No. 171-A A3 B1 C5 D E1 F6 G1 52
*helium, *liquid, *solidified gas, *melting curve, helium II

00988 Metingen over de voortplantingssnelheid van het geluid in vloeistoffen bij lage temperaturen. Measurement of the transmission of sound in liquids at low temperature.
De Bock,A.
Verhandel. Koninkl. Vlaam. Acad. Wetenschap. Belg. Kl. Wetenschap. 11, No. 31, (1949)
MF No. 116-L A3 B9 C7 D1 E1 F7 G1 49
*organic fluid, benzene, *inorganic fluid, carbon tetrachloride, carbon disulfide, ether, toluene, *oxygen, *liquid, *velocity of sound

00991 Isothermen van eenatomige stoffen en hunne binaire mengsels. XX. Isothermen van neon van 20 degrees C tot -217 degrees C. Isotherms of binary substances and their binary mixtures. XX. Isotherms of neon from 20 degrees to -217 degrees C.
Crommelin,C.A. Martinez,J.P. Onnes,H.K.
Commun. Phys. Lab Univ. Leiden No. 154a (1919) 3 fig 3 tab 11 ref (Trans. from: Verslag Gewone Vergader. Afdeel. Natuurk. Koninkl. Ned. Akad. Wetenschap. 27, 1316-26, 1919)
MF No. 88-P A3 B4 C7 D1 E1 F7 G1 19
*neon, *gaseous, *PVT data, compressibility factor, *equation of state, virial coefficient, isotherm

00992 The capillary constants for liquid CO and liquid A. A correction.
Crommelin,C.A.
Proc. Chem. Soc. 30, 248-49 (1914)
MF No. 85-G A3 B1 C1 D2 E1 F7 G1 14
*carbon monoxide, *argon, *liquid, correction

00995 The transport properties and the equation of state of gaseous para- and ortho-hydrogen and their mixtures below 40 degrees K.
Cohen,E.D.G. Offerhaus,M.J. van Leeuwan,J.M.J. et al.
Physica 22, 791-815 (Sept 1956)
A3 B1 C6 D1 E1 F6 G1 56
*ortho-hydrogen, *para hydrogen, *gaseous, *equation of state, cross section, *viscosity, *thermal conductivity, *gaseous mixture, concentration effect, *transport property, diffusion coefficient, second virial coefficient

00996 The transport properties and equation of state of gaseous mixtures of the helium isotopes.
Cohen,E.G.D. Offerhaus,M.J. DeBoer,J.
Physica 20, 510-15 (Aug 1954)
MF No. 512-C A3 B1 CC D E F6 G1 54
*helium, *isotope, *gas, *transport property, equation of state, helium 3-helium 4, *gaseous

00998 Entalpie, calori specifici e numeri di prandtl dei gase dei vapori. Enthalpy, specific heat and the prandtl number of gas and vapor
Codegone,Cesare
Atti Accad. Sci. Torino. Classe Sci. Fis. Mat. Nat. 86, 126-28 (1951-2) 1 fig 2 tab 6 ref
MF No. 72-X A3 B5 C1 D1 E2 F7 G1
theory of corresponding states, *technical gas, *methane, *enthalpy, *specific heat, *gaseous, *hydrogen, *helium, reduced variable, *liquid, *ammonia, organic halide, mercury, prandtl number, sulfur dioxide, hydrocarbon

00999 Conduttivita Termica e Grandezze Termodinamiche dei gas e dei vapori. Thermal conductivity and many thermodynamic properties of gas and vapor
Codegone,Cesare
Termotecnica (Milan) 6, 507-12 (Dec 1952) 7 fig 10 tab 8 ref
MF No. 72-Y A3 B5 C1 D1 E1 F7 G1
*thermodynamic property, *helium, *argon, *water, *ammonia, *specific heat, *thermal conductivity, *technical gas, *hydrocarbon, reduced variable, paraffin class, sulfur dioxide, carbon tetrachloride, *gaseous

01054 Propagation of sound in rarefied helium.
Greenspan,M.
J. Acoust. Soc. Am. 22, 568-71 (1950) 4 fig 7 ref
MF No. 39-J A2 B1 C2 D1 E1 F6 G1 50
*velocity of sound, *helium, *gaseous, *physical property, low pressure, sound absorption

01077 Measurements on the velocity of ultrasonic waves in helium at 1 degree K with different frequencies.
Van Itterbeck,A. Forrez,G. Teirlinck,M.
Physica 23, 63-64 (1957)
MF No. 43-M A3 B1 C1 D1 E1 F6 G1 57
*helium, *liquid, *velocity of sound, boiling temperature

01092 A new equation of continuity.
Keyes,F.G.
Proc. Nat. Acad. Sci. U.S. 3, 323-33 (1917)
CA 11 2646 MF No. 50-X A3 B1 C7 D1 E2 F6 G1
*equation of state, *argon, *nitrogen, *PVT data, *density, *gaseous, van der waals

01106 Absorption of sound in fluids.
Markham,J.J. Beyer,R.T. Lindsey,R.B.
Revs. Modern Phys. 23, 353-411 (1951) 25 fig 8 tab 206 ref
MF No. 43-O A3 B1 C1 D1 E2 F6 G1
*helium, *argon, *hydrogen, *nitrogen, *oxygen, *gaseous, *water, *carbon dioxide, *viscosity, *velocity of sound, sound absorption coefficient, *liquid, sound absorption, *organic fluid, *physical property

01116 Some physical properties of compressed gases I. Nitrogen.
Deming,W.E. Shupe,L.E.
Phys. Rev. 37, 638-55 (1931)
MF No. 97-L A3 B1 C8 D1 E F6 G1
*nitrogen, *gaseous, *PVT data, *density, *specific heat, temperature effect, pressure effect, calculation

01126 Lattice theories of liquids and solutions at low temperatures.
Rowlinson,J.S.
Discussions Faraday Soc. 15, 52-56 (1953)
MF No. 51-A A3 B1 C2 D1 E2 F7 G1 53
*free energy, *entropy, *binary liquid, carbon tetrachloride, *methane, butane, benzene, chlorine, hexande, argon, boiling temperature, *solution, theory

01130 Physical constants at low temperatures. (1) - The densities of solid oxygen, nitrogen, hydrogen, etc.
Dewar,J.
Proc. Roy. Soc. (London) A73, 251-61 (1904)
MF No. 80-C A3 B1 C1 D1 E1 F6 G1
*physical property, *density, *oxygen, *nitrogen, *hydrogen, argon, carbon monoxide, solid

01133 On the liquefaction of oxygen and the critical volume of fluids.
Dewar,J.
Phil. Mag. 18, 210-16 (1884)
MF No. 88-R A3 B1 C1 D1 E2 F6 G1 84
*oxygen, *liquid, *critical constant

01152 The thermodynamic properties of gaseous hydrogen from experimental data of state.
White,D.L. Johnston,H.L.
Ohio State Res. Foundation Cryogenic Lab., Columbus, Tech. Rept. No. TR 264-26 (Nov 1953) Contr. No. W33-038-ac-14794(16243)
ASTIA AD 27 622 MF No. 92-U A3 B1 C1 D3 E1 F5 G5
*PVT data, *hydrogen, *equation of state, *entropy, *enthalpy, specific heat

01154 Second sound velocity measurements below 1 degree K.
De Klerk,D. Hudson,R.P. Pellam,J.R.
Phys. Rev. 89, No. 1, 326-27 (Jan 1953)
A3 B1 C4 D1 E1 F6 G1 53
*helium, *liquid, *velocity of sound, second sound

01174 The compression of solidified gases at low temperatures.
Stewart,J.W.
Virginia Univ., Charlottesville, Final Tech. Rept. (1956)
Contr. No. DA-36-034-ORD-1205, 13 p 2 tab 20 ref
ASTIA AD 90606 A3 B1 C7 D1 E1 F5 G5 56
*hydrogen, *helium, *argon, *nitrogen, *compressibility, *solidified gas, very high pressure

01179 Zur Entropie des Argons. The entropy of argon.
Clusius,K. Frank,A.
Z. Elektrochem. 49, 308-9 (1943)
A3 B3 C1 D1 E2 F7 G1
*argon, *entropy, *specific heat, *boiling point

01182 Second sound propagation below 1 degree K.
De Klerk,D. Hudson,R.P. Pellam,J.R.
Phys. Rev. 93, No. 1, 28-37 (Jan 1954)
A3 B1 C4 D1 E1 F6 G1 54
*helium, *liquid, *velocity of sound, second sound

01210 On the influence of pressure on the viscosity of liquid helium I.
Tjerkstra,H.H.
Physica 18, 853-61 (Nov 1952)
A3 B1 C1 D1 E1 F6 G1
*viscosity, *helium, *liquid, lambda temperature, *pressure effect, apparatus, mathematical analysis

01238 Die spezifische warme der gase bei mittleren und hohen temperaturen. I. Die spezifische warme der gase: Luft, stickstoff, sauerstoff, kohlenoxyd, kohlensaure, stickoxydul und methan zwischen 0 grad und 220 grade C. The specific heats of gases at medium and high temperatures. I. The specific heat of the gases air, N2, O2, CO, NO, and CH4 between 0 degree and 200 degrees C.
Eucken,A. Lude,K.
Z. physik. Chem. (Leipzig) B5, 413-41 (1929) 8 fig 3 tab 33 ref
MF No. 88-T A3 B3 C2 D1 E1 F7 G1 29
*air, *nitrogen, *oxygen, *carbon monoxide, *inorganic fluid, oxide of nitrogen, *gaseous, *specific heat, temperature effect

01246 Heat transport in helium II.
Andronikashvilii,E.L.
J. Exptl. Theoret. Phys. (U.S.S.R) 19, 535-42 (Jun 1949)
A3 B7 C1 D E F7 G1
*helium, *liquid, *viscosity, helium II, fountain effect, heat transport

01288 Isothermen messungen bei huharen Drucken. Isotherm measurements at high pressures.
Michels,A. Gibson,R.O.
Ann. Physik 87, 850-76 (1928)
MF No. 76-O A3 B3 C8 D1 E1 F7 G1
*neon, *isotherm, *PVT data

01295 The thermal conductivity of dielectric solids at low temperatures.
Berman,R.
Advances in Phys. 2, 103-40 (Jan 1953)
A2 B1 C5 D3 E3 F7 G1 53
*inorganic solid, sapphire, *quartz, *carbon, diamond, salt, alum, potassium, *graphite, *nylon, *thermal conductivity, temperature effect, theory;
A3 B1 C5 D3 E3
*helium, *solidified gas, *thermal conductivity, temperature effect, theory

01370 Freezing directly from the gas phase in a low-density nitrogen atmosphere.
Little,A.D.Inc.
Univ. Southern California, Los Angeles, Rept. C-60437 (Nov 1956)
A3 B1 C1 D1 E1 F8 G5
*nitrogen, *thermal conductivity, *gaseous, low pressure, freeze out

01393 Ultrasonic measurements in magnetically cooled helium.
Chase,C.E. Herlin,M.A.
Phys. Rev. 95, 561-66 (July 1954)
A3 B1 C5 D E1 F6 G1 54
*velocity of sound, *helium, *liquid

01416 Uber Umwandlungen Des Festen Mono und Tetradeuteromethans. Die Entropieverhaltnisse Des Monodeuteromethans Und Des Deuteriumhydrids. The transition of the solid mono and tetra deuteromethanes. The entropy relation of mono deuteromethane and of deuterium hydride.
Clusius,K. Popp,L. Frank,A.
Physica 4, No. 10, 1105-16 (1937)
MF No. 86-0 A3 B3 C1 D1 E F6 G1
*methane, *deutero compound, deutero methane, *phase transition property, *solidified gas, solid-solid transition, *specific heat, *triple point, melting temperature, *heat of fusion, *entropy

01464 The theory of the propagation of second sound in helium II.
Dingle,R.B.
Proc. Phys. Soc. (London) B61, 9-21 (Jan 1948)
A3 B1 C5 D E3 F6 G1
*helium, *liquid, *velocity of sound, *thermal conductivity, *physical property, helium I, sound absorption, temperature effect, theory

01465 The theory of the propagation of first and second sound in helium II. Energy theorems and irreversible processes.
Dingle,R.B.
Proc. Phys. Soc., (London) A65, 638-52 (Jun 1950)
A3 B1 C5 D E3 F6 G1 50
*helium, *liquid, *velocity of sound, helium II, second sound, theory

01467 The hydrodynamics of helium II.
Dingle,R.B.
Proc. Phys. Soc., (London) A62, 648-55 (Oct 1949)
A3 B1 C5 D E3 F6 G1 49
*helium, *liquid, superfluid, *velocity of sound, helium II

01510 Equation of state of solid helium
Kane,G.
J. Chem. Phys. 9, 568-70 (Jul 1941) 1 tab 10 ref
MF No. 8-H A3 B1 C5 D1 E1 F6 G1
*helium, *equation of state, *solidified gas

01511 Zum zahigkeitsverhalten von ortho- und para-wasserstoff. On the viscosity behavior of ortho and para hydrogen.
Falk,G. Mann,A.
Z. Physik 142, 277-96 (1955) 20 ref
MF No. 143-X A3 B3 C6 D1 E3 F7 G1 55
*orthohydrogen, *parahydrogen, *viscosity, theory, mathematical analysis, *gaseous

01520 Statistical mechanical calculation of the data of state of the helium isotopes at intermediate temperatures and densities.
Friedman,A.S. Oppenheim,I.
Phys. Rev. 99, 638 (Jul 1955)
A3 B1 C1 D2 E3 F6 G1
*helium, *gaseous, helium 3, helium 4, *isotope, calculation, compressibility factor, quantum effect, theory

01549 The Landau velocity in liquid helium II.
Gegate,D.V. Pathak,P.D.
Proc. Phys. Soc., (London) 59, 457-61 (May 1947)
A3 B1 C5 D E F6 G1 47
*helium, *velocity of sound, *liquid, helium II, second sound,

01565 Discussion of the properties of helium II on the basis of the two fluid model.
Gorter,C.J. Kasteleijn,P.W. Mellink,J.H.
Physica 16, 113-21 (Feb 1950) 2 fig 1 tab 15 ref
MF No. 71-C A3 B1 C5 D1 E F6 G1 50
*helium, *liquid, *velocity of sound, *entropy, *specific heat

01594 The melting pressure of helium II.
Haggenmacher,J.E.
Phys. Rev. 74, 1539 (1948) 1 tab 2 ref
MF No. 170-F A3 B1 C5 D1 E3 F6 G1 48
*helium, helium II, *melting curve, equation, lambda temperature, equation

01595 The heat of vaporization of helium II below 1.5 degree K.
Haggenmacher,J.E.
Phys. Rev. 69, 242-43 (1946) 1 tab 3 ref
MF No. 177-M A3 B1 C5 D1 E3 F6 G1 46
*helium, helium II, *liquid, *heat of vaporization, calculation

01603 Quantum effect in compressed liquid hydrogen.
Harman,S.D.
J. Am. Chem. Soc. 76, 4244 (Aug 1954)
A3 B1 C6 D1 E3 F6 G1
*hydrogen, *liquid, *PVT data, compressibility factor, quantum effect, calculation

01617 Eine neue Bestimmung der normalen Siedepunkte von Sauerstoff, Stickstoff und Wasserstoff. A new determination of the normal boiling points of oxygen, nitrogen, and hydrogen.
Henning,F. Heuse,W.
Z. Physik 8, 105-16 (1924) 1 fig 10 tab 14 ref
MF No. 82-B A3 B3 C1 D1 E1 F7 G1 24
*boiling temperature, *oxygen, *hydrogen, *nitrogen, *liquid

01669 Isotherms for helium, nitrogen, and argon below 0 degrees C.
Holborn,L. Otto,J.
Z. Physik 30, 320-28 (1924) 1 fig 24 tab 2 ref
MF No. 125-B A3 B1 C1 D1 E1 F7 G1
*helium, *nitrogen, *argon, isotherm, *PVT data, *gaseous

01778 A new explanation of liquid helium II.
Macleod,D.B. Yeabsley,H.J.
Trans. Faraday Soc. 42, 601-15 (Sept-Oct 1946)
A3 B1 C5 D1 E2 F7 G1
*helium, *liquid, *specific heat, helium II, anomaly

01845 Theory of intermolecular potential and second virial coefficient of hydrogen at low temperatures.
Mizushima,M. Ohno,K. Ohno,A.
J. Chem. Phys. 21, 2107-14 (Dec 1953)
MF No. 126-X A3 B1 C6 D1 E3 F6 G1 53
*hydrogen, *gaseous, *equation of state, second virial coefficient, intermolecular force, quantum effect, mathematical

01860 Measurements on the velocity of sound in gaseous argon and deuterium respectively at liquid oxygen and hydrogen temperatures. Calculation and discussion of the second virial coefficient of argon.
Van Itterbeek,A. Van Paemel,O.
Physica 5, 133-53 (1938)
MF No. 119-E A3 B1 C1 D1 E1 F6 G1
*argon, *deuterium, *velocity of sound, gaseous, specific heat ratio, liquid hydrogen temperature, *virial coefficient, second virial coefficient, ultrasonic technique, hydrogen

01870 The phenomenological theory of liquid helium II.
Nakajima,S. Tomita,K. Usui,T.
Phys. Rev. 78, No. 6, 768-79 (Jun 1950) 11 fig 2 tab 22 ref
A4 B1 C5 D1 E2 F6 G1
*thermal conductivity, *helium, *liquid, helium II, temperature

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*argon, *rare gas, krypton, xenon, *liquid, *vapor pressure, *density, *gaseous, *PVT data

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MF No. 28-Q A3 B1 C1 D1 E1 F6 G1
*neon, *argon, *krypton, *xenon, *nitrogen, *oxygen, *carbon monoxide, *methane, *virial coefficient, *density, *gaseous, *liquid, law of corresponding states, reduced variable,

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*helium, *isotope, gaseous, helium 3, helium 3-helium 4 mixture, helium 4, *viscosity, calculation, equation, theory, reduced

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Henning,F.
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Noeggerath,W.C.
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Stewart,J.L.
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Zhur. Tekh. Fiz. 10, 725-32 (1940)
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*viscosity, *binary system, *liquid, nitrogen, *ethane, *methane, liquid mixture, *ethylene, *propane, propene

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*thermometry, platinum, helium;
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*boiling temperature, *oxygen, *temperature scale

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*thermal property, *specific heat, *gaseous, *velocity of sound, *air, *oxygen, *hydrogen, *carbon monoxide, *carbon dioxide,

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MF No. 96-B A3 B1 C1 D1 E1 F7 G1
*PVT data, *enthalpy, *carbon dioxide, *gaseous, *methane, *ethane, *ammonia, *butane, law of corresponding states, pentane,

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MF No. 28-X A3 B3 C6 D1 E3 F7 G1
*oxygen, *methane, *helium, *specific heat, *solidified gas,

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*air, *hydrogen, *nitrogen, *carbon dioxide, *inorganic fluid, oxide of nitrogen, *methane, *oxygen, *gaseous, equation, calculation, *viscosity, thermal conductivity, collision integral, *carbon monoxide, *argon, *neon, *helium, *gaseous

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*helium, *liquid, helium-4, *vapor pressure, temperature

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Schmidt,Ernst
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*helium, *liquid, *vapor pressure, lambda point

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*triple point, *carbon dioxide, *argon, *thermometry, *gas

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*velocity of sound, ultrasonic technique, acoustics, *helium, *liquid helium, *boiling point, *hydrogen, diffusion, gaseous

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*physical property, *thermodynamic property, *hydrocarbon, *density, *vapor pressure, *boiling temperature, *methane, *ethane, *heat of vaporization, *entropy, heat of formation, *specific heat, *liquid, *surface tension

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Van Itterbeck,A. Verbeke,O.
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A3 B1 C7 D1 E1 F7 G1
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MF No 106-P A3 B1 C1 D1 E1 F8 G6
*oxygen, *nitrogen, *condensation, *pressure, *heat of vaporization, cryogenic temperature

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Maryott,A.A. Buckley,F.
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*inorganic fluid, *dielectric constant, boron compound, hydrogen sulfide, fluoride, nitrogen, oxide of nitrogen, *gaseous, *organic fluid, *hydrocarbon, *acetylene, *ethylene, propene;
A3 B1 C7 D1 E2
*dielectric constant, *helium, *hydrogen, *oxygen, *argon, *air, *nitrogen, *carbon dioxide, *gaseous, *carbon monoxide

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2 fig 4 ref
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*oxygen, *PVT data, *compressibility, *liquid, *expansivity, *equation of state, virial coefficient, *specific heat, *velocity of sound, *vapor pressure, *critical constants, *phase transition property,

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Physica 4, No. 8, 609-16 (1937)
MF No. 110-O A3 B1 C1 D1 E1 F6 G1
*oxygen, *hydrogen, *carbon monoxide, *velocity of sound, *absorption, sound absorption, pressure effect, *argon,

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Thomaes,G. Van Steenwinkel,R.
Nature 187, No. 4733, 229-30 (1960)
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*methane, *equation of state, second virial coefficient

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J. Res. Natl. Bur. Standards 26, 495-536 (Jun 1941) 3 fig 7 tab
MF No. 122-C A3 B1 C8 D1 E2 F6 G1
*oxygen, *PVT data, compressibility factor, *reduced variable, *gaseous, pressure effect, *argon, *hydrogen, *nitrogen, *helium, *neon, equation, calculation

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*air, *oxygen *velocity of sound, specific heat ratio, density, *gaseous

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Law,R.R.
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*carbon dioxide, *specific heat, benzene, *solidified gas, lattice parameter, ammonium chloride, sulfur, *debye constant

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Trans. Am. Soc. Mech. Engrs. 72, No. 1, 751-57 (Aug 1950)
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MF No. 8-D A3 B1 C1 D1 E2 F6 G1
*helium, *gaseous, *density, *thermal conductivity, *enthalpy, *entropy, *viscosity

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*helium, *viscosity, *thermal conductivity, *gaseous, *transport

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MF No. 77-M A3 B1 C1 D1 E3 F6 G1
*neon, *argon, *rare gas, krypton, xenon, *viscosity, *thermal conductivity, *gaseous, transport property, diffusion

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*viscosity, *hydrocarbon, *argon, *organic fluid, *methane, carbon tetrachloride, benzene, electric field, melting point,

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MF No. 78-B A3 B2 C7 D1 E2 F7 G1
*thermal conductivity, *viscosity, *gaseous, *hydrogen, *nitrogen, *air, *carbon dioxide, *carbon monoxide, *methane, *specific heat, *ethane, oxide of nitrogen diffusion, prandtl number, *gaseous mixture

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Andrussow,Leonid
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*thermal conductivity, *viscosity, *specific heat, *reduced variable, *gaseous, *hydrogen, *deuterium, *nitrogen, *carbon monoxide, *oxygen, *methane, *carbon dioxide, *methylene,

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J. Research Natl. Bur. Standards 55, No. 5, 265-77 (1955)
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MF No. 75-M A3 B1 C1 D1 E1 F6 G1
*binary system, *oxygen, *nitrogen, *vapor pressure, *phase equilibrium, saturated liquid, saturated vapor, activity coefficient, *gaseous mixture, *liquid mixture

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*helium, *liquid, *surface tension, helium II, theory

05109 Wave propagation of flow in liquid helium II.
Atkins,K.R.
Advances Phys. 1, 169-208 (Apr 1952)
A3 B1 C5 D E2 F7 G1 52
*helium, *velocity of sound, *liquid, helium II, second sound,

05110 The velocity of first sound in liquid helium.
Atkins,K.R. Chase,C.E.
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MF No. 38-B A3 B1 C5 D1 E1 F6 G1 51
*helium, *velocity of sound, *liquid, first sound

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Phys. Rev. 93, 1416 (1954)
CA 1954 7368h MF No. 30-E A3 B1 C4 D1 E1 F6 G1 54
*helium, *liquid, *expansivity, helium II, thermal expansion

05114 First sound in liquid helium at high pressures.
Atkins,K.R. Stasior,R.A.
Can. J. Phys. 31, 1156-64 (Nov 1953)
MF No. 38-C A3 B1 C5 D1 E1 F7 G1 53
specific heat, *helium, *velocity of sound, *liquid, specific heat ratio, temperature effect, pressure effect, thermal expansion

05118 Zur thermishen und Calorimischen Zustandsgleichungen der Kondensierten Wasserstoffisotepen. On thermal and calorimetric equations of state of condensed hydrogen isotopes.
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MF No. 76-C A3 B3 C6 D1 E1 F7 G1 36
*hydrogen, *deuterium, *equations of state, *liquid, *PVT data, *melting curve, *compressibility, *density

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MF No. 77-D A3 B3 C6 D1 E1 F7 G1
*specific heat, *hydrogen, *isotope, *liquid, deuterium,

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Bartlett,E.P.
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MF No. 63-C A3 B1 C8 D1 E1 F6 G1 27
*hydrogen, *nitrogen, *gaseous mixture, *PVT data, *density, correction, high pressure, isotherm, *gaseous, *binary system, compressibility factor

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J. Am. Chem. Soc. 49, 687-701 (1927)
MF No. 77-T A3 B1 C8 D1 E1 F6 G1 27
*PVT data, *hydrogen, *nitrogen, *gaseous, compressibility factor, *density, *gaseous mixture, *binary system, isotherm, high

05123 The compressibility isotherms of hydrogen, nitrogen and a 3:1 mixture of these gases at temperatures of -70, -50, -25 and -20 degrees and at pressures to 1000 atmospheres.
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MF No. 63-D A3 B1 C8 D1 E1 F6 G1 30
compressibility factor, isotherm, *hydrogen, *nitrogen, *gaseous mixture, *PVT data, high pressure, isotherm, *gaseous, *binary

05124 A review of thermal conductivity and viscosity for ammonia, ethylene, nitrogen, carbon dioxide and argon
Bateman,J.S.
Proc. Conf. Thermodynamic Transport Properties Fluids, 169-81 (1958)
MF No. 78-N A3 B1 C1 D1 E2 F8 G2
*viscosity, *thermal conductivity, *ammonia, *ethane, *nitrogen, *carbon dioxide, *argon, *gaseous, *ethylene

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Baume,G. Perrot,F.L.
Compt. rend. 148, 39-42 (1909)
MF No. 28-B A3 B2 C2 D1 E1 F7 G1
*methane, *density, carbon, atomic weight

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Beall,I.N.
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MF No. 50-T A3 B1 C7 D1 E1 F6 G1
*methane, *ethane, *liquid, *gaseous, pressure, *enthalpy, *entropy, *density

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Beattie,J.A. Julien,H.P.
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*argon, *density, *gaseous

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Z. Physik 140, 535-38 (1955)
MF No. 77-W A3 B3 C6 D1 E1 F7 G1 55
*viscosity, *hydrogen deuteride, *helium, helium 3, helium 4, *deuterium, *hydrogen, normal hydrogen, *gaseous, temperature

05133 Viscosity of gaseous He3 and He4 between 1.3 degrees K and 4.2 degrees K.
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Phys. Rev. 93, No. 1, 244 (1954)
CA 1954 6183h A3 B1 C5 D1 E1 F6 G1 54
*helium, *viscosity, *gaseous, helium 3, helium 4

05134 Die zahigkeit von gasformigem He3 and He4 zwischen 1.3 degrees K und 4.2 degrees K. Zur quantenstatistik des gaskinetischen zusammenstosses bei tiefen temperaturen. Viscosity of gaseous He3 and He4 between 1.3 degrees and 4.2 degrees K. Quantum statistics of the gas-kinetic collision at low temperatures.
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Z. Physik. 137, 126-36 (1954)
CA 1954 6183g A3 B3 C5 D1 E3 F7 G1 54
*helium, *viscosity, helium 3, helium 4, *gaseous;

05136 Difference in viscosity of ortho and para-deuterium at low temperatures.
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CA 47 10930f A3 B1 C6 D3 E1 F6 G1 53
*deuterium, *viscosity, *liquid, ortho-para deuterium, *para-deuterium, orthodeuterium

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Z. Physik 136 457-62 (1953)
CA 48 4910g A3 B3 C1 D E F7 G1 53
*deuterium, *viscosity, *liquid, ortho deuterium, ortho-para deuterium

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Beenakker,J.J.M. Taconis,K.W. Lynton,E.A. Dokoupil,Z. Van Soest,G.
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A3 B1 C5 D E1 F6 G1 52
*helium, *liquid, *thermal conductivity, helium II, impurity

05139 The isotherms of the hydrogen isotopes and their mixtures with helium at the boiling point of hydrogen
Beenakker,J.J.M. Varekamp,F.H. Van Itterbeck,A.
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MF No. 159-H A3 B1 C6 D1 E1 F6 G1
*hydrogen, *helium, *gaseous, *equation of state, second virial coefficient, *gaseous mixture, *PVT data, isotherm, virial coefficient, *deuterium, *hydrogen deuteride

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Simon,F.E.
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MF No. 68-D A3 B3 C6 D1 E1 F7 G1
*halogen, *hydrogen, *argon, chlorine, bromine, iodine, *specific heat, *free energy, *solidified gas, *sodium, *zinc,

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Dewar,J.
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MF No. 41-X A3 B1 C6 D1 E1 F7 G1
*water, *solidified gas, ice, *expansivity, *thermal expansion, *density, *inorganic fluid, carbonic acid, *oxygen, *nitrogen, *hydrogen

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MF No. 28-A A3 B1 C2 D1 E1 F6 G1
*enthalpy, *hydrocarbon, *mixture, *methane, *ethane, *propane, *butane, joule-thompson effect, nomogram

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Ewald,A.H. Jpson,W.R. Rowlinson,J.S.
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MF No. 54-Z A3 B1 C8 D1 E1 F7 G1 53
*solidfied gas, *carbon dioxide, air, ethylene, gaseous, *solution, solubility, calculation

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CA 42-2825c MF No. 29-J A3 B2 C2 D1 E1 F7 G1
*thermodynamic properties, *hydrocarbon, methane, methyl, chloride, *specific heat, *free energy, *enthalpy, *ethane, theory,

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Lebedev,V.I.
Akad. Nauk. S.S.S.R. Doklady, 63, 645-48 (1948)
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*gaseous, *specific heat, chlorine, *argon, *halogen, atomic heat, *sodium, *magnesium, *aluminum, *silicon, *element group 5A, *element group 6A, sulfur, phosphorous

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Long,E. Meyer,L.
Phys. Rev. 83, 860 (Aug 1951) 2 ref
MF No. 170-F A3 B1 C5 D1 E1 F6 G1
*helium, *liquid, *vapor pressure, lambda temperature, helium 4

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A3 B1 C5 D1 E F6 G1
*helium, helium II, *liquid, *thermal conductivity, film

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Lifshits,E.M. Peshkov,V.P.
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A3 B1 C5 D1 E1 F7 G1 46
*helium, *velocity of sound, *liquid, helium I, second sound

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Lifshits,I.M. Kaganov,M.I.
Zhur. Eksptl. i Teoret Fiz. 29, 257-58 (1955)
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*helium, *liquid, *density, helium II

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Lane,C.T. Fairbank,H.A. Fairbank,W.M.
Phys. Rev. 71, 600-05 (May 1947)
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*velocity of sound, *helium, *liquid, helium II, second sound, lambda temperature

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2 fig 5 tab 5 ref
A3 B1 C7 D1 E2 F6 G1
*inorganic fluid, fluoride, ozone, *density, *vapor pressure, *phase transition property, heat of formation,

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Kohnstamm,P. Walstra,K.W.
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*hydrogen, isotherm, *PVT data, *gaseous, compressibility factor

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Kistemaker,J.
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*helium, *liquid, *vapor pressure, *heat of vaporization,

05370 Properties of liquid helium.
Kistemaker,J.
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CA 43 2058h MF No. 186-V A3 B2 C5 D1 E2 F7 G1
*helium, *liquid, *specific heat, *phase diagram, lambda temperature, saturated liquid, *heat of vaporization, *surface tension, *viscosity, *thermal conductivity, *electrical property,

05376 Thermal conductivity and absorption of sound in helium II.
Khalatnikov,I.M.
Zhur. Eksptl. i Teoret. Fiz. 23, 21-34 (1952)
A3 B7 C5 D1 E F7 G1 52
*helium, *thermal conductivity, *liquid, *physical property,

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Keesom,W.H. Walstra,W.K.
Physica. 13, 225-30 (May 1947)
MF No. 126-K A3 B1 C6 D1 E1 F7 G1 47
*helium, virial coefficient, isotherm, *gaseous, *equation of state

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Physica 13, 153-80 (May 1947)
A3 B2 C5 D1 E1 F6 G1
*helium, helium I, *liquid, *thermal conductivity, temperature

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Keesom,W.H. Bijl,A. Monte,L.A.J.
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*air, *nitrogen, *viscosity, *gaseous, low pressure

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Johns,T.F.
Atomic Energy Research Establ. GP/R 2166 (1957) 53 pp 23 fig 10 tab 20 ref
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*carbon monoxide, *methane, *oxygen, *isotope, *vapor pressure, *solidified gas, *liquid

05405 Thermal conductivity of liquid nitrogen.
Prosad,Surajdeo
Current Sci. (India) 20, 264 (1951)
CA 46 6920h A3 B1 C7 D1 E F7 G1
*thermal conductivity, *nitrogen, *liquid

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*helium, *velocity of sound, *liquid, second sound, helium II,

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Paoluzi,G.
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A3 B5 C8 D1 E2 F7 G1
*isotherm, *neon, *nitrogen, *oxygen, *carbon monoxide, *methane, *density, *gaseous, equilibrium constant, pressure effect, *equation of state

05429 Isothermes de l'hydrogene entre -104 degrees C et -244 degrees C. Hydrogen isotherms between -104 degrees C and -244 degrees C.
Onnes,H.K. Penning,F.M.
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*hydrogen, isotherms, *PVT data, *gaseous, *density,

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Nicklin,A.W.
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A3 B1 C8 D3 E3 F7 G3
*carbon dioxide, *nitrogen, *air, *hydrogen, *helium, *gaseous, *thermal conductivity, *viscosity, *specific heat, calculation

05434 Solid carbon dioxide (Dry ice).
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A3 B1 C8 D1 E2 F2 G9 44
*carbon dioxide, *solidfied gas, *density, *vapor pressure, *heat of sublimation, *heat of fusion, *specific heat

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CA 46, 9964f MF No. 159-F A3 B6 C5 D1 E F7 G1
*hydrogen, normal hydrogen, *parahydrogen, *specific heat, *solidified gas, crystal structure

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*hydrogen, *boiling temperature, normal hydrogen

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Mills,R.L. Grilly,E.R.
Phys. Rev. 101, 1246-47 (Feb 1956) 3 fig 1 tab 3 ref
MF No. 159-J A3 B1 C6 D3 E1 F6 G1
*melting curve, *hydrogen, *deuterium, *tritium, phase transition,

05461 The thermomechanical effects in liquid helium II.
Meyer,L. Mellink,J.H.
Physica 13, 197-215 (May 1947) 3 fig 4 tab 21 ref, Communs. Kamerlingh Onnes Lab., Univ. Leiden, No. 272b
A3 B1 C5 D1 E1 F6 G1
*helium, *liquid, helium II, *thermal conductivity, temperature

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A3 B1 C5 D1 E F7 G1 47
*helium, *liquid, helium I, *thermal conductivity, superfluid

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A3 B1 C5 D1 E1 F6 G1
*helium. *liquid. helium I. *thermal conductivity. temperature

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Liang,S.Chu
J. Phys. Chem. 56, 660-62 (1952) 8 ref
CA 46 8918b MF No. 26-E A3 B1 C7 D1 E1 F6 G1
*vapor pressure, *methane, *acetylene, *liquid, *ethylene, thermomolecular pressure ratio, thermal transpiration, *nitrogen, *solidified gas

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Lamb,A.B. Roper,E.E.
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MF No. 89-K A3 B1 C8 D1 E1 F6 G1
*hydrocarbon, *vapor pressure, *methane, *ethane, *liquid, *ethylene, propane, temperature effect, butane

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Kruis, H.A. Popp, L. Clusius-Munchen, K.
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MF No. 29-A A3 B3 C1 D1 E1 F7 G1
*phase transition, * heat of fusion, *methane, *melting point, *triple point, *inorganic solid, deutero-compound, hydride,

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*helium, *liquid, *specific heat, *entropy, temperature effect,

05490 Specific heat of solid oxygen below 4 degrees K
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*oxygen, *specific heat, *solidified gas, *temperature effect,

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Kordes,E.
Z. Elektrochem. 58, 424-31 (1954) 1 fig 25 tab 3 ref
MF No. 33-E A3 B3 C1 D1 E2 F7 G1
*heat of vaporization, *carbon dioxide, *ammonia, *liquid, *hydrogen, carbon monoxide, water, *ethane, *hydrocarbon, *oxygen, *argon, *organic fluid, freon 13, *inorganic fluid

05493 Thermochemistry for the petrochemical industry. Part VI. The combustion gases
Kobe,K.A. Long,E.G.
Petrol. Refiner, 28, No. 11, 127-32 (1949) 3 fig 15 tab 61 ref
CA 44-4232d MF No. 37-M A3 B1 C2 D1 E2 F7 G1
*specific heat, *free energy, *enthalpy, *nitrogen, *oxygen, *air, *hydrogen, *carbon monoxide, *carbon dioxide, *water,

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Knudsen,M.
Ann. Physik 34, 593-656 (1911) 4 fig 15 tab 10 ref
MF No. 95-A A3 B3 C2 D1 E1 F7 G1 11
*accomodation coefficient, *hydrogen, *oxygen, *carbon dioxide, *thermal conductivity, *gaseous

05497 Gaseous heat capacities II.
Kistiakowsky,G.B. Rice,W.W.
J. Chem. Phys. 8, 610-18 (Aug 1940) 2 fig 12 tab 30 ref
MF No. 55-P A3 B1 C8 D1 E1 F6 G1
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Keyes,R.W.
J. Chem. Phys. 31, No. 2, 452-5 (Aug 1959)
MF No. 96-M A3 B1 C1 D1 E2 F6 G1
*neon, *argon, krypton, *thermal conductivity, xenon, *hydrogen, *solidified gas, *rare gas, *reduced variable, law of corresponding states

05502 The thermodynamic properties of methane
Keyes,F.G. Taylor,R.S. Smith,L.B.
J. Math. and Phys. 1, 211-42 (1922) 8 fig 9 tab 15 ref
MF No. 52-U A3 B1 C2 D1 E1 F6 G1
*methane, *gaseous, *liquid, *vapor pressure, *heat of vaporization, *critical constant, *density, saturated

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Keesom,W.H. Van Lammeren,J.A.
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MF No. 81-T A3 B1 C6 D1 E1 F6 G1
*neon, *velocity of sound, *gaseous, pressure effect, *specific heat, atomic heat, equation, calculation

05503 V-Vapor pressure, specific volumes, and PVT data for H20, NH3, CH4, C2H4 with comments on mixtures
Keyes,F.G.
Trans. Am. Soc. Mech. Engrs., 70, 641-44 (1948) 3 fig 1 tab 18 ref
MF No. 28-T A3 B1 C2 D1 E2 F6 G1
*vapor pressure, *density, *PVT data, *ammonia, *water, *methane,

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Keyes,F.G.
Trans. Am. Soc. Mech. Engrs., 76, 809-16 (1954) 13 fig 2 tab 28 ref
CA 48-10398 MF No. 26-C A3 B1 C8 D1 E1 F6 G1
*thermal conductivity, *neon, *argon, *hydrogen, *ammonia, *ethane, *methane, pressure coefficient, nitrous oxide, *ethylene, ethyl chloride, freon 12, carbon dioxide, freon 114,

05505 Thermal conductivity of gases.
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CA 50-636d MF No. 36-N A3 B1 C2 D1 E2 F6 G1
*thermal conductivity, *argon, *krypton, *xenon, *nitrogen, *oxygen, carbon dioxide, *methane, pressure coefficient, *gaseous

05507 Measurement of the viscosity of five gases at elevated pressures by the oscillating-disk method.
Kestin,J. Pilarczyk,K.
Trans. Am. Soc. Mech. Engrs. 76, 987-99 (1954)
MF No. 27-U A3 B1 C2 D1 E2 F6 G1
*viscosity, *air, *nitrogen, *hydrogen, *argon, *helium.

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Keesom,W.H. Houthoff,D.J.
Bull. IIR 20, 153-66 (Apr 1928)
MF No. 69-E A3 B2 C5 D1 E2 F7 G1 28
*entropy, *helium, *hydrogen, *gaseous, *liquid, T-S diagram

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Keesom,W.H. Haantjes,J.
Physica 2, 986-99 (1935)
MF No. 61-B A3 B1 C1 D1 E2 F6 G1 35
*neon, *vapor pressure, *isotope, *liquid

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Keesom,W.H. Bijl,A. Van Ierland,JF.A.A.
Appl. Sci. Research A5, 349-58 (1955)
CA 50 5350a MF No. 27-J A3 B2 C0 D1 E F7 G1 55
*oxygen, *carbon monoxide, *enthalpy, *equation of state,

05515 The log T vs. S diagram of helium.
Keesom,W.H. Bijl,A. Monte,L.A.J.
Appl. Sci. Research A4, 25-33 (1953)
MF No. 70-G A3 B2 C6 D1 E3 F7 G1 53
*helium, *gaseous, *entropy, T-S diagram

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Keesom,W.H. Bijl,A.
Physica 4, 305-10 (1937) 2 fig 2 tab 16 ref
MF No. 82-U A3 B1 C1 D1 E1 F6 G1
*nitrogen, *liquid, *vapor pressure, *boiling temperature, *triple point, *solidified gas

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Karwat,E.
Z. physik. Chem. 112, 486-90 (1924)
CA 19 1515 1 MF No 28-Y A3 B3 C1 D1 E2 F7 G1
*methane, *ammonia, *solidified gas, *vapor pressure,

05520 The thermal conductivity of rare gases.
Kannuluik,W.G. Carman,E.H.
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CA 10756c MF No. 26-A A3 B1 C7 D1 E1 F6 G1
*neon, *gaseous, *thermal conductivity, *helium, *argon, *rare gas, krypton, xenon, equation, temperature effect

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Trans. Am. Soc. Mech. Engrs. 72, 785-87 (1950)
A3 B1 C6 D1 E2 F6 G1 50
*isotherm, *hydrogen, *gaseous, *Pvt data, compressibility

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J. Am. Chem. Soc. 76, 1482-86 (Mar 1954) 5 fig 2 tab 14 ref
MF No. 159-O A3 D1 C6 D1 E1 F6 G1
*hydrogen, *liquid, compressibility factor, boiling to critical point, *PVT data, isotherm, saturated liquid, equation

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CA 46 5949g MF No. 71-U A3 B1 C7 D1 E1 F6 G1
*thermal conductivity, *liquid, *oxygen, temperature effect

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MF No. 59-Q A3 B7 C6 D1 E1 F7 G1 39
*oxygen, *nitrogen, *solidified gas, *phase transition property, solid-solid transition, melting point, solid solution, *binary

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Physica 9, 396-404 (1942)
MF No. 84-V A3 B2 C D1 E2 F6 G1
*specific heat, *liquid, *argon, mercury, monatomic

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*hydrogen, normal hydrogen, *parahydrogen, *liquid, *thermal conductivity, temperature effect, equation

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Porter,F. Perry,J.H.
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MF No. 82-I A3 B1 C7 D1 E1 F6 G1
*vapor pressure, *nitrogen, *liquid

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GAS ENGINEER'S HANDBOOK, McGraw Hill Book Co., Inc. New York, 370 (1934) 1 tab
MF No. 66-O A3 B1 C1 D1 E2 F6 G2
*hydrocarbon, *heat of vaporization, *critical constant, *density, *liquid, *gaseous, *methane, *ethane, *butane,

05535 Die Warmeleitfahigkeit von Gasen und Dampfen. The heat conductivity of gases and vapors
Orlicek,A.F.
Mitt. Chem. Forschungsinst. Wirtsch. Oesterr. 7, No. 4, 124-25 (1953) 1 fig 1 tab 1 ref
MF No. 73-F A3 B3 C8 D1 E2 F G1
*thermal conductivity, *gaseous, *hydrocarbon, *organic chemical, ethane, *ethylene, acetylene, hexane, alcohol,

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MF No. 73-G A3 B3 C2 D1 E2 F7 G1
*specific heat, *gaseous, oxide of nitrogen, freon, freon 113, *carbon monoxide, *air, *methane, *nitrogen, *hydrogen, ethane, *carbon dioxide, *ammonia, *ethylene

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MF No. 171-I A3 B1 C6 D1 E1 F7 G1
*critical constant, *neon, critical temperature, critical

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Nelson,L.C. Obert,E.F.
Trans. Am. Soc. Mech. Engrs. 76, 1057-66 (1954) 6 fig 3 tab 313 ref
MF No. 42-K A3 B1 C2 D1 E2 F6 G1
*gaseous, *PVT data, *inert gas, *ammonia, *carbon dioxide, *ethane, *ethylene, *hydrogen, *methane, *technical gas,

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Moles,E. Roquero,C.
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*density, *oxygen, *ammonia, *gaseous, gas constant

05547 Revision of the mass of the normal liter of ammonia gas. Atomic weight of nitrogen
Moles,E. Sancho,J.
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MF No. 81-F A3 B6 C2 D1 E1 F7 G1
*ammonia, *density, *nitrogen, *atomic weight, *gaseous,

05548 Nueva Revision de la densidad Normal del Gas Oxido de Carbono. Peso Atomico del Carbono. New revision of the normal density of the gas, carbon dioxide, atomic weight of carbon
Moles,E. Salazar,M.T.
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MF No. 82-P A3 B8 C1 D1 E F7 G1
*carbon dioxide, *density, *atomic weight, *gaseous, *physical

05550 Thermodynamic properties of oxygen and nitrogen.
Millar,R.W. Sullivan,J.D.
U.S. Bur. Mines Tech. Papers No. 424, 1-20 (1928) 7 tab 20 ref
MF No. 69-K A3 B1 C7 D1 E2 F8 G9 28
*oxygen, *nitrogen, *gaseous, *specific heat, *entropy, *enthalpy, *PVT data, isotherm, saturated vapor;

05551 Isotherms of argon between 0 degrees C and 150 degrees C and pressures up to 2900 atmospheres.
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Physica 15, No. 7, 627-33 (1949)
MF No. 84-F A3 B1 C8 D1 E1 F6 G6
*argon, *PVT data, *gaseous, compressibility factor, density, very high pressure, isotherms, pressure effect, virial coefficient, second virial coefficient, third virial coefficient

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J. Appl. Phys. 26, No. 7, 843-45 (Jul 1955)
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*nitrogen, *argon, *viscosity, *density, *thermal conductivity, *gaseous

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Mathias,E. Crommelin,C.A.
Proc. Intern. Congr. Refrig. 7th Congr. The Hague, Amsterdam, 96-102 (1936)
MF No. 97-R A3 B1 C1 D1 E F7 G2
*rare gas, krypton, *solidified gas, *vapor pressure, equation, *carbon monoxide, *helium, *liquid, *gaseous, saturated liquid, saturated vapor, *density, law of rectilinear diameters

05564 Report on the work done in the Leiden Cryogenic Laboratory concerning the equation of state of argon, neon and hydrogen between the third and fourth internation congress of refrigeration
Mathias,E. Crommelin,C.A.
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MF No. 97-Q A3 B1 C1 D1 E1 F7 G2
*heat of vaporization, *argon, *neon, *hydrogen, *vapor pressure, *liquid, *density, *critical constant, *triple point, xenon, *helium, *oxygen

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Meslan,F.D. Littmann,T.M.
Ind. Eng. Chem. 45, 1566-8 (1953)
MF No. 30-R A3 B1 C8 D1 E2 F6 G1
compressibility factor, *hydrogen, *critical constants, *reduced variable, *helium, *neon, *argon, *gaseous, *PVT data

05569 The NBS-NACA tables of thermal properties of gases. Table 13.20 Compressibility factor of carbon dioxide
Masi,J.F.
Natl. Bur. Standards, Heat & Power Div., Table 13.20, 9 pp 4 ref
A3 B1 C1 D1 E2 F2 G6
*carbon dioxide, *gaseous, *PVT data, table, compressibility

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Masi,J.F.
Natl. Bur. Standards, Heat & Power Div., Table 13.22 (Dec 1949) 6 pp 5 ref
A3 B1 C2 D1 E2 F2 G6
*carbon dioxide, *enthalpy, *entropy, *gaseous

05571 The NBS-NACA tables of thermal properties of gases. Table 13.24 Carbon dioxide, specific heat
Masi,J.F.
Natl. Bur. Standards, Heat & Power Div., Table 13.24 (Dec 1949) 7 pp 2 fig 8 ref
A3 B1 C2 D1 E2 F2 G6
*carbon dioxide, *specific heat, *gaseous

05572 Linde rare gases.
Linde Air Products Co., New York, Rept. (Oct 1957) 15 p 11 fig 2 tab
A3 B1 C8 D E F8 G5
*argon, *neon, *helium, *rare gas, krypton, xenon, *gaseous, *PVT data, compressibility factor, *velocity of sound, *thermal conductivity, *critical constants, *heat of vaporization, *specific heat

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Keyes,F.G.
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*gaseous, *viscosity, *thermal conductivity, *helium, *argon, *hydrogen, *oxygen, *nitrogen, *carbon monoxide, *carbon dioxide,

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MF No. 80-V A3 B1 C6 D1 E1 F7 G1
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Cardoso,Ettore
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CA 19152474 MF No. 88-N A3 B2 C1 D1 E1 F7 G1
*critical constants, *oxygen, *methane, *nitrogen, *carbon monoxide

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MF No. 160-T A3 B1 C7 D1 E2 F6 G1
*argon, *entropy, *free energy, *enthalpy, *specific heat, *velocity of sound, *joule-thomson coefficient, *internal energy, *PVT data, compressibility factor, saturated liquid,

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MF No. 160-T A3 B1 C7 D1 E1 F6 G1
*argon, *gaseous, *liquid, *PVT data, compressibility factor, saturated liquid, saturated vapor, *density, *equation of state, virial coefficient, second virial coefficient, third virial coefficient

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A3 B1 C5 D E F6 G1 55
*helium, *liquid, *compressibility, helium II, superfluid

05590 Compressibility and heat transfer of helium II.
Forstat,H. Reynolds,C.A.
Phys. Rev. 101, No. 2, 513-18 (Jan 1956) 3 fig 2 tab 21 ref
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*helium, *liquid, *compressibility, helium II, superfluid

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MF No. 114-I A3 B3 C6 D1 E1 F7 G1 35
*density, *triple point, *deuterium, *solidified gas, *liquid, *specific heat, *melting curve, *heat of vaporization, *heat of fusion, *heat of sublimation

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*helium, *liquid, *vapor pressure, equation, temperature effect

05600 Eigenschaften, Konstanten und Verwendung. Properties, constants and applications
Bronn,J.
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MF No. 28-D A3 B3 C1 D1 E2 F7 G1
*velocity of sound, *viscosity, *specific heat, *gaseous, *air, *water, *hydrogen, *nitrogen, *methane, *carbon dioxide,

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Brillantinov,N.A.
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CA 1950-4301a MF No. 44-W A3 B7 C7 D1 E1 F7 G1
*air, *oxygen, *gaseous, *joule-thomson coefficient, inversion

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Billig,Kurt
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MF No. 35-V A3 B3 C2 D1 E2 F7 G1
*boiling temperatures, *water, *ammonia, *ozone, *inorganic

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Fales,H.A. Shapiro,C.S.
J. Am. Chem. Soc. 62, 393-406 (1940) 2 fig 5 tab 23 ref
MF No. 82-Q A3 B1 C7 D1 E2 F7 G1
*rare gas, *density, *gaseous, *carbon monoxide, *water, *helium, reduced variable, temperature effect, equation,

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Latimer,R.E.
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MF No. 58-L A3 B1 C7 D1 E1 F5 G5
*vapor pressure, *nitrogen, *argon, *oxygen, *binary system, ternary system, *liquid mixture, *phase equilibrium

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*helium, *liquid, *vapor pressure, *boiling temperature, helium 3-helium 4, helium 4, lambda temperature

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Can. J. Phys. 34, 898-900 (Aug 1956)
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*helium, *liquid, *refractive index, *expansivity, thermal expansion, lambda temperature, temperature effect

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Dutta,A.
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A3 B1 C1 D2 E2 F7 G1
*gaseous, *boiling temperature, *viscosity, *hydrogen, *nitrogen, *oxygen, *carbon monoxide, *carbon dioxide, *liquid, *air, *argon

05644 Thermodynamic properties and melting of solid helium
Dugdale,J.S. Simon,F.E.
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MF No. 122-K A3 B1 C5 D1 E1 F6 G1
*helium, *solidified gas, *melting curve, *thermodynamic property,

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Declaux,Jacques
Compt. rend. 226, 1124-26 (1948)
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*oxygen, *nitrogen, *argon, *gaseous, *PVT data, compressibility

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Donnelly,R.J. Chester,G.V. Walmsley,R.H. Lane,C.T.
Phys. Rev. 102, 3-4 (1956)
MF No. 38-U A3 B1 C1 D1 E1 F6 G1
*helium, *liquid, *transport property, *viscosity, helium I, helium II, rotation

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A3 B1 C5 D1 E2 F7 G2
*helium, *thermodynamic property, *thermal conductivity, *melting curve, *solidified gas, helium 3, helium 4

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MF No. 147-Q A3 B1 C6 D1 E1 F7 G1
*argon, *density, *expansivity, *solidified gas, grunelsen parameter

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Dingle,R.B.
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A3 B1 C5 D E F6 C1 52
*helium, *liquid, *velocity of sound, helium II, second sound

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MF No. 87-O A3 B1 C1 D1 E2 F6 G1
*ethylene, *argon, *gaseous mixture, *binary system, *PVT data, *hydrogen, *carbon monoxide, *nitrogen, *methane

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*specific heat, *entropy, *enthalpy, *water, *solidified gas,

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*equation of state, *vapor pressure, *liquid, *methane, *ethane, *propane, *butane, *carbon dioxide, *water, alcohol

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CA 45 6441c A3 B1 C6 D1 E2 F6 G1
*hydrogen, *critical constant, *boiling temperature, *triple point, *vapor pressure, *liquid, *hydrogen deuteride, *deuterium, *tritium, *inorganic fluid, hydrogen tritide,

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J. Am. Chem. Soc. 76, 1552-53 (Mar 1954) 2 fig 2 tab 4 ref
A3 B1 C6 D1 E1 F6 G1
*deuterium, *liquid, *PVT data, compressibility factor,

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MF No. 61-Y A3 B1 C2 D1 E1 F6 G1
*methane, *hydrogen, *mixture, *vapor pressure, *isotherm, *melting curve, *triple point, PVT measurements

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Frederikse,H.P.R.
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*helium, *specific heat, adsorption

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*methane, *entropy, *enthalpy, *specific heat, *liquid, heat of fusion

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Franck,E.U.
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*transport property, *gaseous mixture, *argon, *helium, *thermal conductivity, oxide of nitrogen, diffusion, dissociation

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*thermal conductivity, *neon, *gaseous

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MF No. 80-R A3 B1 C1 D1 E1 F7 G1 26
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Van Paemel,O.
Verhandel. Koninkl. Vlaam. Acad. Wetenschap. Belg. Kl. Wetenschap. 3, No. 3, 3-59, (1941) 11 fig 9 tab 23 ref
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*neon, *helium, *argon, *deuterium, *hydrogen, *ethane, *carbon monoxide, *oxygen, *nitrogen, *liquid, *gaseous, viscosity

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MF No. 86-X A3 B1 C1 D1 E1 F7 G1
*argon, *methane, *liquid, *velocity of sound, *specific heat, ultrasonic technique, *compressibility, hydrogen, helium,

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*carbon monoxide, *deuterium, temperature dependence, pressure effect, liquid helium temperature, *velocity of sound, specific heat ratio, apparatus

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*oxygen, *gaseous, *viscosity, *hydrogen, *air, *nitrogen

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MF No. 33-Y A3 B9 C5 D1 E2 F7 G1
*helium, *liquid, *density, *dielectric constant, saturated liquid, *specific heat, *viscosity, lambda temperature, *solidified gas

05718 Empirical specific heat equations based upon spectroscopic data
Sweigert,R.L. Beardsley,M.W.
Georgia Inst. Technol. Eng. Exp. Sta. 1, No. 3, 3-11 (1938)
2 fig 1 tab 22 ref
CA 33-4502 (4) MF No. 29-R A3 B1 C2 D1 E1 F8 G5
*oxygen, *nitrogen, *carbon dioxide, *hydrogen, *carbon monoxide, *water, *methane, *ethane, *hydrocarbon, *specific heat.

05719 Compressibilities of some solidified gases at low temperature.
Stewart,J.W.
Phys. Rev. 37, 578-82 (Feb 1955)
PA 2678 MF No. 27-G A3 B1 C5 D1 E1 F6 G1 55
*hydrogen, *deuterium, *neon, *argon, *rare gas, krypton, *nitrogen, *solidified gas, *compressibility

[illegible] The liquid-solid transition in helium near absolute zero.
[illegible]
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M No. [illegible] AS B1 C4 D1 K1 [illegible] 01
*helium, phase equilibrium, *triple point, *PVT data, *liquid, *melting curve

[illegible] Anomale spezifische Wärmen des festen Wasserstoffs bei Helium-Temperaturen. The anomalous specific heat of hydrogen at helium temperatures.
Simon,F.E. Mendelssohn,K. Ruhemann,M.
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*hydrogen, *specific heat, *solidified gas, debye constant,

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*equation of state, *carbon monoxide, *nitrogen, *phase equilibrium, *binary system, *PVT data, fugacity, *liquid

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*helium, *hydrogen, *nitrogen, *oxygen, *air, *carbon monoxide, *specific heat, specific heat ratio, *gaseous

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MF No. 72-U AS B1 C6 D1 K3 F8 01
*thermal conductivity, *hydrogen, *liquid, high pressure,

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*carbon dioxide, *nitrogen, *methane, PVT data, *gaseous

[illegible] Phase equilibria in hydrocarbon systems, II. Methane-propane system.
Sage,B.H. Lacey,W.N. Schaafsma,J.G.
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*phase equilibrium, *methane, *propane, *critical constant, *PVT data, *gaseous mixture, retrograde condensation, *binary

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MF No. 76-J AS B3 [illegible]
*oxygen, *nitrogen, *liquid mixture, *binary system, *phase equilibrium, liquid-solid equilibrium, *specific heat, *heat of fusion, concentration effect;

[illegible] Zustandsdiagramme niedrigschmelzender Gemische. I. Das System Methan-Äthylen. Phase diagrams of low melting point mixtures. I. The system methane-ethylene.
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MF No. 50-T AS B3 C1 D1 K1 F2 01 34
*phase diagram, *binary system, *methane, ethylene, low

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*viscosity, *liquid, *oxygen, *nitrogen, *methane, *ethylene,

[illegible] The reduced equation of state.
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CA 50 6140g MF No. 77-O AS B1 C6 D1 K2 F2 01
*nitrogen, *carbon monoxide, *carbon dioxide, *gaseous, *neon, *helium, *argon, *rare gas, krypton, xenon, *PVT data,

[illegible] Measurements on the viscosity of Ne-A mixtures between 300 and 70 degrees K.
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MF No. 30-Y AS B1 C2 D1 K1 F8 01 56
*viscosity, *neon, *argon, *gaseous mixture

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Rankine,A.O.
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*helium, *neon, *argon, krypton, xenon, *air, *viscosity, *rare gas, *gaseous

[illegible] Metingen over de Voortplantingssnelheid van het Geluid in Enkele Vloeibaar Gemaakte Gassen. Measurements of the speed of propagation of sound in some liquefied gases.
Verhaegen,L.
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*oxygen, *nitrogen, *liquid, *velocity of sound, *argon, *hydrogen, normal hydrogen, *methane, *compressibility, specific

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*helium, *gaseous, *velocity of sound, *specific heat, specific heat ratio

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Ubbink,J.B.
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AS B1 C6 D3 K2 F8 01
*heat transport, *heat conduction, helium, *gaseous, *thermal conductivity, viscosity, temperature effect, equation

[illegible] The vapor pressures of some hydrocarbons in the liquid and solid state at low temperatures.
Ziegler,W.T.
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AS B1 C2 D1 K2 F3 06 59
*vapor pressure, *methane, *ethane, *propane, *butane, *liquid, *acetylene, *ethylene, *hydrocarbon, pentane, propylene, butene, *solidified gas;

[illegible] Heat conduction of the boundary layer in liquid helium II.
White,D. Gonzales,O.D. Johnston,H.L.
Phys. Rev. 89, No. 3, 593-94 (Feb 1953) 3 fig 4 ref
AS B1 C5 D3 K1 F8 01
*helium, *liquid, helium II, *thermal conductivity

[illegible] Neon, fluorine,: Density, heat of vap., normal boil. pt., melt. pt.
Washburn,E.W.
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*neon, *density, *fluorine, *phase transition heats, *heat of vaporization

[illegible] Neon vapor pressure.
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*neon, *vapor pressure

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Walling,J.F. Halsey,G.D.,Jr.
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ASTIA AD 148 [illegible] AS B1 C2 D1 K1 F8 01
*solidified gas, *solution, *argon, krypton, *rare gas, *phase equilibrium, solid solution, *vapor pressure, *binary system,

[illegible] Metingen over de thermodiffusie en de inwendige wrijving in enkele gasmengsels bij lage en zeer lage temperaturen. Measurements of thermal diffusion and viscosity of certain gas mixtures at low and very low temperatures.
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CA 43 5629h MF No. 107-D AS B4 C2 D3 K1 F2 01 47
*gaseous mixture, *binary system, *hydrogen, *nitrogen, *viscosity, *gaseous, low pressure;

[illegible] Die Additivität der Grössen b und Quadratwurzel a der Zustandsgleichung und die fundamentalen Wert dieser Grössen für verschiedene Elemente im Zusammenhang mit dem periodischen System. The additiveness of the quantities b and the square root of a of the equation of state and the fundamental values of these quantities for different elements in relation to the periodic system.
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*helium, *hydrogen, *neon, *nitrogen, *oxygen, *argon, *methane, *ammonia, *organic fluid, *hydrocarbon, second virial coefficient, *critical constant, *equation of state

05810 Velocity of sound in liquid hydrogen.
Van Itterbeek,A. Verhaegen,L.
Nature 163, 399 (Mar 1949)
MF No. 118-U A3 B1 C1 D1 E1 F7 G1
*hydrogen, *liquid hydrogen, *velocity of sound

05813 Velocity of sound in mixtures of argon, helium and hydrogen at low temperatures.
Van Itterbeek,A. Vandoninck,W.
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MF No. 119-B A3 B1 C7 D1 E1 F7 G1
*argon, *helium, *hydrogen, *velocity of sound, ultrasonic technique, *gaseous mixture, equation of state, pressure effect.

05814 Measurements of the velocity of sound in helium gas at liquid helium temperatures.
Van Itterbeek,A. Forrez,G.
Physica 20, 767-72 (1954)
MF No. 115-U A3 B1 C5 D1 E1 F6 G1 54
*helium, *gaseous, *velocity of sound, *specific heat,

05816 A new calculation of the saturated vapor pressure of liquid helium for use as a temperature scale.
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A3 B1 C5 D2 E3 F6 G1
*helium, *liquid, *vapor pressure

05825 Thermal conductivity of gaseous hydrogen and of gaseous deuterium
Ubbink,J.B.
Physica 14, 165-74 (Apr 1948) 7 fig 5 tab 14 ref
A3 B1 C6 D1 E1 F7 G1
*thermal conductivity, *hydrogen, *deuterium, *gaseous, *viscosity, *specific heat

05831 On the state of solid hydrogen.
Tomita,K. Mannari,I.
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MF No. 158-Q A3 B1 C5 D3 E1 F7 G1 53
*solidified gas, *hydrogen, *specific heat, anomaly;

05842 Helium Drie. Helium three.
Ter Haar,D.
Ned. Tijdschr. Natuurk 15, 233-42 (Oct 1949) 13 tab 10 ref
CA 44 13g MF No. 173-F A3 B4 C5 D1 E1 F7 G1
*helium, helium 3, *liquid, helium 4, *vapor pressure, *reduced

05865 Condensation of pure He3 and its vapor pressures between 1.2 degrees and its critical point.
Sydoriak,S.G. Grilly,E.R. Hammel,E.F.
Phys. Rev. 75, 303-05 (Jan 1949)
A3 B1 C5 D1 E1 F6 G1
*helium, *liquid, helium 3, *vapor pressure, *critical constant, *boiling temperatures, helium 4

05869 The liquid-solid transformation in helium near absolute zero.
Swenson,C.A.
Phys. Rev. 79, 626-31 (Aug 1950)
A3 B1 C1 D1 E F6 G1
*helium, *phase change, *liquid helium, *melting curve, *density, *heat of fusion, *internal energy, Lambda temperature

05870 The liquid-solid transformation in helium from 1.6 degrees to 4 degrees K
Swenson,C.A.
Phys. Rev. 86, 870-76 (Jun 1952)
CA 8442d A3 B1 C5 D1 E1 F6 G1
*helium, *liquid, *solidified gas, *phase transition property, lambda temperature, *PVT data, *heat of fusion, density, *melting curve

05871 Blocked capillary method for determining melting pressures. The melting curve of helium from 1.5 degrees to 4 degrees K.
Swenson, C.A.
Phys. Rev. 89, 538-44 (Feb 1953)
A3 B1 C1 D E F6 G1
*helium, *melting curve, *cryogenic property, capillary,

05875 Generalized Beatie-Bridgemen equation of state for real gases: butane, CO2, ethane and propane.
Su,G.J. Chang,C.H.
J. Am. Chem. Soc. 68, 1080-3 (1946)
CA AD-5311 A3 B1 C2 D3 E3 F6 G1
*equation of state, *butane, *carbon dioxide, *ethane, *propane

05879 Compressibilities of solid hydrogen and deuterium at 4.2 degrees K
Stewart,J.W. Swenson,C.A.
Abstracted in Phys. Rev. 94, 772 (May 1954) Paper N9, 2 ref
MF No. 152-G A3 B1 C5 D3 E1 F6 G1
*hydrogen, *deuterium, *compressibility, *solidified gas, pressure effect, high pressure

05885 Prazisionsmessungen der Verdampfungswarme der Gase O2, H2S, PH3, A, COS, CH4, and CH3D. Precision measurements of the heat of vaporization of gases O2, H2S, PH3, A, COS, CH4, and CH3D
Frank,A. Clusius,K.
Z. physik. Chem. (Leipzig) B42, 395-421 (1939) 5 fig 11 tab 58 ref
CA 33-5734-9 MF No. 37-V A3 B3 C1 D1 E1 F7 G1
*heat of vaporization, *oxygen, *hydrogen, *inorganic fluid, *argon, *methane, *deutero-compound, *liquid, hydrogen phosphide, carbonyl sulfide, deutero methane, sulfide

05897 Specific heats of fluid argon near the critical point.
Jones,G.O. Walker,J.A.
Proc. Phys. Soc. (London) B69, 1348-49 (1956)
MF No. 84-C A3 B1 C7 D2 E1 F7 G1
*argon, *specific heat, *gaseous, *liquid, *critical region,

05898 Viscosities of several common gases between 90 degree K and room temperature.
Johnston,H.L. McCloskey,K.E.
J. Phys. Chem. 44, 1038-59 (1940) 3 fig 15 tab 30 ref
MF No. 28-W A3 B1 C7 D1 E1 F6 G1
*viscosity, *air, *hydrogen, *nitrogen, *carbon dioxide, *methane, *gaseous, oxide of nitrogen

05899 The thermal conductivities of eight common gases between 90 degrees and 380 degrees K
Johnston,H.L. Grilly,E.R.
J. Chem. Phys. 14, No. 4, 233-38 (Apr 1946) 1 fig 11 tab 5 ref
MF No. 37-I A3 B1 C7 D1 E1 F6 G1
*thermal conductivity, *gaseous, *inorganic fluid, *oxygen, *nitrogen, *carbon monoxide, *hydrogen, *helium, *carbon dioxide, *methane, oxide of nitrogen, temperature effect

05902 The viscosity of liquid hydrogen.
Johns,H.E.
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MF No. 38-Q A3 B1 C1 D1 E1 F7 G1
*hydrogen, *liquid, *viscosity, capillary

05903 Thermal conductivity of nitrogen at high temperatures and pressures.
Johannin,P. Vodar,B.
Ind. Eng. Chem. 49, 2040-41 (1957)
MF No. 44-Z A3 B1 C2 D1 E1 F6 G1
*nitrogen, *thermal conductivity, *gaseous, high pressure

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Iwasaki,Hiroji
Bull. Chem. Research Inst. Non-Aqueous Solutions, Tohoku Univ. 3, 117-28 (1953) 7 fig 6 tab 17 ref
CA 48-11860i MF No. 33-V A3 B6 C8 D1 E2 F7 G1 53
*nitrogen, *gaseous, *viscosity, temperature effect, pressure effect;

05897 Investigation of thermodynamic properties of air and nitrogen at high pressures and low temperatures. I. Thermodynamic diagrams of state for air and nitrogen.
Ishkin,I.P. Kaganer,M.G.
Soviet Phys. JETP 1, 2263-71 (1956)
CA 1957 6867b MF No. 44-V A3 B1 C7 D1 E1 F6 G1 56
*air, *nitrogen, *gaseous, *joule-thomson coefficients, *entropy, *density, *phase diagram, compressibility factor

05899 On the surface layer of liquid argon.
Inouye,T.
J. Phys. Soc. Japan 6, 243-48 (1951)
MF No. 84-[illegible] A3 B6 C1 D1 E2 F7 G1 51
*argon, *liquid, *surface tension, surface energy, theory

05904 Isothermes de Substances Monoatomiques et de Leurs Melanges Binaires. XXI. Determinations d'isothermes de l'hydrogene et de l'helium a Basse Temperature, Faites en vue d'examiner si la compressibilite de ces gaz est Influencee par les Quanta. Isotherms of monatomic substances, and their binary mixtures. XXI. The determination of the isotherms of hydrogen and helium at low temperatures, made with a view to examine the compressibility of gases influenced by the quantity.
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A3 B2 C2 D3 E1 F7 G1
*hydrogen, *helium, isotherms, compressibility factor, *PVT data, *gaseous

05908 Neon equilibrium properties of rare gases.
Madan,R.P.
J. Phys. Chem. 62, 893-94 (1958)
CA 52 19309h A3 B1 C1 D F3 G6 G1 58
*neon, *gaseous, *rare gas, xenon, *transport property, *viscosity, intermolecular force, equation, calculation, theory

05910 Thermal conductivity of He-A-Xe ternary mixture.
Saxena,S.C.
J. Chem. Phys. 26, 360-61 (1956)
A3 B1 C1 D1 E2 F6 G1 56
*thermal conductivity, *helium, *argon, *xenon, *ternary system, *gaseous mixture

05911 Thermal conductivity of some gases at 0 degrees C
Kannuluik,W.G. Martin,L.H.
Proc. Roy. Soc. (London) A144, 496-513 (1934) 13 tab 21 ref
MF No. 53-F A3 B1 C2 D1 E1 F7 G1
*thermal conductivity, *air, *gaseous, *hydrogen, *carbon dioxide, *carbon monoxide, *oxygen, *helium, *neon, *argon, oxide of nitrogen

05912 Thermal conductivity of binary and ternary mixtures of helium, argon and xenon.
Saxena,S.C.
Indian J. Phys. 31, 597-606 (1957) 4 fig 5 tab 9 ref
MF No. 50-D A3 B1 C1 D1 E1 F7 G1 57
*gaseous mixture data, *thermal conductivity, *ternary system, *helium, *argon, *xenon

05913 Specific heat of solid carbon dioxide.
Venkateswaran,C.S.
Current Sci. (India) 12, 252-3 (1943)
MF No. 68-K A3 B1 C1 D1 E1 F7 G1
*carbon dioxide, *solidified gas, *specific heat

05914 Experimental determination of heat conductivity for gases.
Keyes,F.G.
Trans. ASME 71, No. 8, 939 (Nov 1949)
MF No. 46-T A3 B1 C8 D1 E1 F6 G1 49
*carbon dioxide, *liquid, *gaseous, *thermal conductivity;

05915 Sur le point de fusion et les forces intermoleculaires. On the melting point and intermolecular forces.
Popovici,M.S. Pop,M.
Compt. rend. 246, 2609-11 (1958)
MF No. 50-F A3 B2 C5 D1 E2 F7 G1 58
*helium, *neon, *argon, *rare gas, krypton, xenon, radon, *solidified gas, melting point, intermolecular force;

05919 Saturation pressures of some vapors between 10 degrees and -181 degrees
Henning,M.F. Stock,A.
Z. Phsik 4, 226-44 (1921) 2 fig 16 tab 11 ref
MF No. 89-B A3 B3 C1 D1 E1 F7 G1
*vapor pressure, *carbon dioxide, *ammonia, *ethylene, *methane, *liquid, carbon disulfide, hydrogen chloride, phosphorus

05920 The viscosity of liquid helium I.
Heikkila,W.J. Hallett,A.C.H.
Can. J. Phys. 33, 420-35 (1955) 7 fig 3 tab 14 ref
MF No. 38-X A3 B1 C1 D1 E1 F7 G1
*helium, *liquid, *viscosity, helium II

05921 The new specific heats
Heck,R.C.H.
Mech. Eng. 62, 9-12 (1940) 3 fig 5 tab 3 ref
CA 34-22404 MF No. 37-S A3 B1 C1 D1 E1 F6 G1
*specific heat, *hydrogen, *carbon monoxide, *nitrogen, *oxygen, *carbon dioxide, *water, *enthalpy, *internal energy, *gaseous

05928 Heat of vaporization and surface energy of serveral liquids.
Harasima,Akira
Proc. Phys. Math. Soc. Japan 23, 977-83 (1941) 4 tab 6 ref
MF No. 113-D A3 B6 C1 D1 E3 F7 G1 41
*liquid, *heat of vaporization, *helium, *hydrogen, *deuterium, *neon, *nitrogen, *argon, surface energy, theory

05929 The attenuaton of second sound in liquid helium II.
Hanson,W.B. Pellam,J.R.
Phys. Rev. 95, 604 (Jul 1954) 8 fig 1 tab 16 ref
A3 B1 C5 D1 E F6 G1 54
*helium, *liquid, helium II, second sound, *physical property,

05938 Thermodynamic properties of air, nitrogen and oxygen as imperfect gases.
Hall,N.A. Ibele,W.E.
Minn. Univ. Eng. Expt. Sta., Tech. Paper No. 85, (1951)
157 pp 2 fig 6 tab 14 ref
ASTIA AD-42 301 A3 B1 C0 D E F6 G5
*air, *nitrogen, *oxygen, *gaseous, *PVT data, compressibility factor, *equation of state, second virial coefficient, third virial coefficient

05944 The thermal conductivity of carbon dioxide in the region of the critical point
Guildner,L.A.
Mass. Inst. Technol., Cambridge, Tech. Rept. MIT-19-P (Sept 1958)
Contr. No. 1858(25)
ASTIA AD 205 802 A3 B1 C2 D E F3 G5
*carbon dioxide, *thermal conductivity, critical region, *gaseous.

05946 Melting properties of he3 and he4 up to 3500 kg/cm2.
Grilly,E.R. Mills,R.L.
Ann. Phys. 8, No. 1, 1-23 (Sept 1959) 9 fig 7 tab 36 ref
MF No. 98-P A3 B1 C5 D1 E1 F6 G1
*helium, *melting curve, *solidified gas, *liquid, *density, *expansivity, helium 3, helium 4, *phase transition property, *pressure effect

05955 Solid helium at "high" temperatures.
Holland,F.A. Huggill,J.A.W. Jones,G.O. Simon,F.E.
Nature 165, 147-48 (Jan 1950) 1 fig 2 ref
MF No. 171-P A3 B1 C6 D1 E1 F7 G1
*helium, *melting curve, critical temperature, very high pressure, pressure effect

05959 The viscosity, thermal conductivity, and prandtl number for air, oxygen, nitrogen, nitric oxide, hydrogen, carbon monoxide, carbon dioxide, water, helium and ar[illegible]
Hilsenrath,J. Touloukian,Y.S.
Trans. Am. Soc. Mech. Engrs. 76, 967-85 (1954) 5[illegible] fig 8 tab 111 ref
MF No. 27-M A3 B1 C[illegible] D1 E1 F6 G1
*viscosity, *thermal conductivity, *air, *oxygen, *nitrogen, *gaseous, hydrogen, *carbon monoxide, *carbon dioxide, *water, *helium, *argon, prandtl number, oxide of nitrogen

05963 The specific heat of liquid helium.
Hill,R.W. Lounasmaa,O.V.
Phil. Mag. 2, 143-48 (1957) 2 fig 2 tab 7 ref
MF No. 70-B A3 B1 C1 D1 E1 F6 G1
*helium, *liquid, *specific heat, *vapor pressure, *entropy

05967 Uber das "b" der van der Waalschen gleichung. On the "B" in the Van der Waals equation.
Herz,W.
Z. Elektrochem. 29, 527-30 (1923) 4 tab 7 ref
MF No. 80-I A3 B3 C7 D1 E2 F7 G1 23
*equation of state, *gaseous, van der waals, *helium, *neon, *argon, *rare gas, krypton, xenon, *inorganic fluid, *carbon dioxide, carbon disulfide, carbon tetrachloride, phosphorous trihydride;

05968 The specific heat of liquid helium II as a function of pressure.
Hercus,G.R. Wilks,J.
Phil. Mag. 45, 1163-72 (Nov 1954) 5 fig 3 tab 16 ref
A3 B1 C5 D1 E1 F6 G1
*specific heat, *helium, *liquid, saturated liquid, helium I, pressure effect, *entropy

05972 Specific heat of liquid helium at temperatures between 0.6 and 1.6 degrees K.
Hull,R.A. Wilkinson,K.R. Wilks,J.
Proc. Phys. Soc. (London) 64A, 379-88 (Apr 1951) 5 fig 1 tab 19 ref
MR No. 171-E A3 B1 C4 D1 E1 F6 G1
*helium, *liquid, *specific heat, temperature effect, equation

05978 Some vibrational properties of solid helium.
Hooton,D.J.
Phil. Mag. 46, 485-98 (May 1955)
MF No. 13-S A3 B1 C5 D1 E3 F6 G1 55
helium, solidified gas, *specific heat, debye constant, theory,

05980 Untersuchungen uber das Gleichgewicht von Flussigkeit und Dampf des Systems Argon-Stickstoff. Investigation of the equilibrium liquid-vapor of the system argon-nitrogen
Holst,G. Hamburger,L.
Z. Physik. Chem. 91, 513-47 (1916) 17 fig 11 tab 39 ref
MF No. 60-H A3 B3 C1 D1 E1 F7 G1
*argon, *nitrogen, *liquid mixture, *binary system, *vapor pressure, T-X diagram, *phase equilibrium

05981 Experiments with a rotating cylinder viscometer in liquid helium II.
Hollis-Hallett,A.C.
Proc. Cambridge Phil. Soc. 49, 717-27 (Oct 1953)
A3 B1 C5 D1 E1 F7 G1 53
*helium, *liquid, helium II, *viscosity;

05982 Oscillating disc experiments in liquid helium II.
Hollis-Hallett,A.C.
Proc. Phys. Soc., (London) A63, 1367-68 (Dec 1950)
A3 B1 C5 D1 E1 F7 G1 50
*helium, *liquid, *viscosity, *density, helium II

05988 Warmeleitfahigkeit von flussigem Sauerstoff, flussigem Stickstoff und ihren Gemischen. Thermal conductivity of liquid oxygen and liquid nitrogen and their mixtures.
Harmann,Gunther
Ann. Physik 32, 593-607 (1938) 7 fig 1 tab 15 ref
CA 32 8907 MF No. 137-V A3 B3 C1 D1 E1 F7 G1
*oxygen, *nitrogen, *liquid, *liquid mixture, *binary system, *thermal conductivity, temperature effect

05990 Thermische Messungen an Flussigen Wasserstoff. Thermal measurements of liquid hydrogen.
Gutsche,H.
Z. physik. Chem. A184, 45-58 (1939) 5 fig 4 tab 10 ref
MF No. 114-H A3 B3 C6 D1 E1 F7 G1 39
*hydrogen, *liquid, *specific heat, *entropy

05992 Thermal conductivity of liquid helium.
Grenier,C.
Phys. Rev. 91, 598-603 (1951) 7 fig 2 tab 8 ref
A3 B1 C5 D1 E1 F6 G1
*helium, *liquid, *thermal conductivity, temperature effect,

05998 Die spezifische Warme von Argon und einigen mehratomigen Gasen. The specific heat of argon and of some polyatomic gases
Heuse,W.
Ann. phys. 59, 86-94 (1919) 9 tab 10 ref
MF No. 87-P A3 B3 C8 D1 E1 F7 G1
*specific heat, *gaseous, *argon, *carbon dioxide, *methane, *ethane, *ethylene, oxide of nitrogen, acetylene

06004 The vapor-pressure curve of helium between 4.2 degrees K and 4.8 degrees K.
Worley,R.D. Zemansky,M.W. Boorse,H.A.
Phys. Rev. 93, 45-6 (Jan 1954) 1 fig 6 ref
MF No. 26-M A3 B1 C5 D3 E1 F6 G1
*helium, *vapor pressure, *liquid, equation, temperature effect

06005 Thermal conductivity of liquid helium below 2.0 degrees K.
Fairbank,H.A. Wilkes,J.
Phys. Rev. 95, 277-78 (1954)
MF No 26-O A3 B1 C1 D1 E1 F6 G1 54
helium, liquid, thermal conductivity

06010 Tables of vapor pressure of liquid helium.
Van Dijk,H. Shoenberg,D.
Nature 164, 151 (Jul 1949)
MF No. 26-X A3 B1 C5 D2 E2 F7 G1
*helium, *liquid, *vapor pressure

06011 Some properties of gas mixtures.
Godridge,A.M.
Brit. Coal Utilization Research Assoc., Bull. 18, No. 1, 1-21 (Jan 1954) 6 tab 136 ref
MF No. 27-B A3 B1 C2 D1 E2 F7 G1
*gaseous, *hydrogen, *nitrogen, *carbon dioxide, *oxygen, *air, heat of combustion, *methane, *carbon monoxide, *specific heat, *viscosity, *thermal conductivity, *gaseous mixture, multi-

06013 Condensed gas calorimetry. VI. The heat capacity of liquid parahydrogen from the boiling point to the critical point.
Smith,A.L. Hallett,N.C. Johnston,H.L.
J. Am. Chem. Soc. 76, 1486-88 (Mar 1954)
MF No. 27-E A3 B1 C6 D1 E1 F6 G1
*specific heat, *liquid, *parahydrogen, *boiling temperature, *critical point, *entropy, boiling point to critical point

06014 Compression to 10,000 atmospheres of solid hydrogen and deuterium at 4.2 degrees K.
Stewart,J.W. Svenson,C.A.
Phys. Rev. 94, 1069-70 (May 1954)
ASTIA AD 103 810 MF No. 27-F A3 B1 C5 D1 E1 F6 G1 54
*compressibility, very high pressure, *hydrogen, *deuterium, cryogenic temperature, *solidified gas

06016 The vapor pressure of normal hydrogen from the boiling point to the critical point
White,D. Friedman,A.S. Johnston,H.L.
J. Am. Chem. Soc. 72, 3927-30 (1950) 3 fig 3 tab 12 ref
MF No. 27-N A3 B1 C6 D1 E1 F6 G1
*hydrogen, boiling to critical point, *vapor pressure, *liquid, normal hydrogen, temperature effect, *heat of vaporization,

06020 Heat of evaporation of helium.
Van Dranen,Johan
J. Chem. Phys. 23, 213 (Jan. 10, 1955)
MF No. 27-X A3 B1 C1 D1 E2 F6 G1 55
*helium, *liquid, helium 4, *heat of vaporization

06022 The solid-fluid equilibrium of helium above 5000 atm. pressure.
Holland, F.A. Huggill, J.A.W. Jones, G.O.
Proc. Roy. Soc. A207, 268-77 (Jun 1951)
MF No. 27-Z A3 B1 C1 D1 E1 F6 G1
*helium, *melting curve, equation, very high pressure, critical

06023 Contribution A L'etude du Point Critique de Quelques Gaz Difficlement Liquefiables. Azote, Oxyde de Carbone, Oxygene, Methane. Critical points of nitrogen, oxygen, carbon monoxide and methane
Cardoso,Ettore
J. chim. Phys. 13, 312-50 (1915) 2 fig 4 tab 31 ref
CA 19162060 MF No. 28-E A3 B2 C1 D1 E1 F7 G1
*critical constant, *gaseous, *nitrogen, *carbon monoxide, *oxygen, *methane, *PVT data

06025 Vapor pressure chart for lower aliphatic hydrocarbons
Copson,R.L. Frolich,K.
Ind. Eng. Chem., 21, 1116-17 (1929) 1 fig 30 ref
MF No. 28-I A3 B1 C1 D1 E2 F6 G1
*vapor pressure, *thermal property, *hydrocarbon, *methane, *propane, *ethane, *butane, *liquid, paraffin class

06026 Thermodynamic properties of methane at low temperature
Corcoran,W.H. Bowles,R.R. Sage,B.H. Lacey,W.N.
Ind. Eng. Chem., 37, 825-28 (1945) 1 fig 3 tab 11 ref
CA 39-4793 (1) MF No. 28-J A3 B1 C8 D1 E2 F6 G1
*methane, *entropy, *T-S diagram, *gaseous

06027 Nomographs for thermal conductivities of gases and vapors.
Davis,D.S.
Ind. Eng. Chem. 33, 675-78 (1941)
MF No. 28-M A3 B1 C7 D1 E2 F6 G1
*gaseous, *thermal conductivity, nomograph, *oxygen, *nitrogen, *air, *hydrogen, *inorganic fluid, oxide of nitrogen, *carbon monoxide, *methane, *ammonia, *hydrocarbon, *carbon dioxide

06028 Triple point of methane
Crommelin,C.A.
Koninkl. Ned. Akad. Wetenschap. Proc. 15, 666 (1912) (Abstracted in J. Chem. Soc. 104, II, 20-21
MF No. 28-L A3 B1 C1 D2 E2 F7 G1
*methane, *triple point, *liquid, *gaseous, *solidified gas

06029 The temperature dependency of the molecular heats of gases, especially of ammonia, methane, and hydrogen at low temperatures
Giacomini,F.A.
Phil. Mag. 50, 146-56 (1925) 3 fig 1 tab 10 ref
CA 19-3056i MF No. 28-P A3 B1 C7 D1 E1 F6 G1
*specific heat, *ammonia, *hydrogen, *methane, *air, *carbon dioxide, ethylene, temperature effect, *gaseous, *liquid

06031 Thermal conductivity of gases. Measurements at high pressure.
Lenoir,J.M. Comings,E.W.
Chem. Eng. Progr. 47, 223-31 (1951) 9 fig 3 tab 19 ref
CA 45-5463i MF No. 29-B A3 B1 C2 D1 E1 F6 G1
*gaseous, *thermal conductivity, *nitrogen, *methane, *argon, *hydrogen, *helium, *carbon dioxide, *ethylene, high pressure

06032 The heat capacity of methane (Letter)
MacDougall,D.P.
Phys. Rev. 38, 2296-98 (1931) 2 fig 1 tab
CA 26-1489 (4) MF No. 29-D A3 B1 C5 D1 E2 F6 G1
*methane, *specific heat, *solid, *liquid, rotational

06034 Methane.
Malisoff,W. Egloff,G.
J. Phys. Chem. 23, 529-75 (1919) 1 tab 150 ref
MF No. 29-F A3 B1 C2 D1 E2 F6 G1 19
*methane, solubility, *critical constants, *triple point, *physical properties, *gaseous, adsorption, thermal expansion, bibliography;

06036 The specific heats of polyatomic gases at low temperatures
Millar,R.W.
J. Am. Chem. Soc. 45, 874-81 (1923) 1 fig 2 tab 13 ref
MF No. 29-H A3 B1 C8 D1 E1 F6 G1
*specific heat, *methane, *gaseous, hydrogen sulfide, methyl chloride. boron trifluoride. specific heat ratio

06037 Propietes thermodynamiques des hydrocarbures. Deuxieme Partie. Donnes numeriques et exemples d'application. Thermodynamic properties of hydrocarbons. Part 2. Numerical data and examples of application
Tcherkezoff,N.
Rev. inst. franc. petrole et Ann. combustibles liquids, 1, 50-58 (1946) 3 tab 77 ref
CA 42-2825c MF No. 29-K A3 B2 C2 D1 E2 F7 G1
*hydrocarbon, *specific heat, *methane, *ethane, *propane, *butane, *enthalpy, *entropy, *heat of fusion, *free energy,

06038 On the latent heats of vaporization of methane and ethane
Satterly,J. Patterson,J.
Trans. Roy. Soc. Can., Section II, 123-27 (1919) 1 fig 2 tab
CA 14-2433(4) MF No. 29-L A3 B1 C1 D1 E1 F7 G1
*heat of vaporization, *methane, *ethane, *liquid

06040 Physical properties of light hydrocarbons
Smith,M.L. Hanson,G.H.
Oil Gas J. 44, No. 10, 119-21 (1945) 1 tab 70 ref
CA 39-3783(2) MF No. 29-N A3 B1 C2 D1 E2 F6 G1
*hydrocarbon, *methane, *ethane, *propane, ethylene, *butane, coefficient of expansion, *vapor pressure, *specific heat, *gaseous, *liquid, *critical constants, *density

06041 Empirical heat capacity equations of gases
Spencer,H.M. Flannagan,G.N.
J. Am. Chem. Soc. 64, 2511-13 (1942) 1 tab 22 ref
CA 37-10 (2) MF No. 29-P A3 B1 C2 D1 E2 F6 G1
*gaseous, *specific heat, *acetylene, *ammonia, *carbon dioxide, carbon disulfide, *hydrocarbon, *methane, *ethylene, *ethane,

06042 The vapor pressure constant of methane
Sterne,T.E.
Phys. Rev. 42, 556-64 (Nov 1932) 2 tab 15 ref
CA 27-456(6) MF No. 29-Q A3 B1 C2 D2 E2 F6 G1
*methane, *vapor pressure, *liquid, *quantum statistics

6043 The measurement of low vapor pressures by means of a mass spectrometer
Tickner,A.W. Lossing,F.P.
J. Phys. & Colloid Chem. 55, 733-40 (1951) 3 fig 1 tab 17 ref
MF No. 29-S A3 B1 C1 D1 E1 F6 G1
*liquid, *methane, *ethylene, *ethane, carbon dioxide, acetylene, *propane, *butane, *hydrocarbon, *vapor pressure, low pressure

06046 Om specifika varmet hos gaser inom forbranningstekniken. On the specific heat of gases in combustion technique.
Lundberg,H.A.
Jernkontorets Ann. 82, 217-46 (1927)
CA 23 3385 4 MF No. 35-T A3 B9 C2 D1 E1 F7 G1
*hydrogen, *oxygen, *nitrogen, *carbon monoxide, *carbon dioxide, *methane, *water, steam, *specific heat, compilation,

06047 Dampfdrucktafeln fur Temperaturbestimmungen zwischen plus 25 degrees und minus 185 degrees. Vapor pressure tables for determinations between plus 25 degrees and minus 185 degrees
Stock,A. Henning,F. Kuss,E.
Ber. deut. chem. Ges. B64, 1119-29 (1921) 2 fig 9 tab 14 ref
CA 15-2376(4) MF No. 35-W A3 B3 C1 D1 E1 F7 G1
*vapor pressure, *carbon dioxide, *methane, *oxygen, *liquid, *ethylene, *ammonia, carbon disulfide, hydrogen chloride, sulfur

06049 A review of the critical constants of various gases.
Pickering,S.F.
J. Phys. Chem. 28, 97-124 (1924) 33 tab 89 ref
MF No. 29-W A3 B1 C7 D1 E2 F6 G1
*acetylene, *air, *ammonia, *argon, *butane, *isobutane, *carbon dioxide, *carbon monoxide, *halogen, chlorine, *ethane, *ethylene, *gaseous, *critical constants, *organic fluid, nitrile, ethyl chloride, *refrigerant, methyl chloride, carbonyl, *methane, *hydrocarbon, propylene, *helium, *hydrogen, *neon, *inorganic

06051 Thermodynamic properties of nitrogen.
Bloomer,O.T. Rao,K.N.
Inst. Gas. Technol. Research Bull. 18, 1-28 (Oct 1952)
7 fig 8 tab 24 ref
MF No. 30-C A3 B1 C7 D1 E1 F6 G1 52
*nitrogen, *density, *entropy, *enthalpy, *chemical potential, *gaseous, mollier diagram, fugacity, table

06054 Measurement of the viscosity of liquid helium II.
Giauque,W.F. Stout,J.W. Barieau,R.E.
J. Am. Chem. Soc. 61, 654-60 (Mar 1939)
MF No. 30-N A3 B1 C1 D1 E1 F6 G1
*viscosity, *helium, *liquid, helium II

06057 Solid-liquid equilibrium in helium.
Simon,F.E.
Symposium on the Physical Chem. of Structural Changes in Solids, England, (Feb 7, 1952) Paper (Abstr. in Chem. and Ind. (London) p 268, Mar 1952)
MF No. 30-V A3 B1 C5 D2 E2 F8 G9 52
*helium, *solidified gas, *liquid, *entropy, melting point, critical point, *melting curve, solid-solid transition

06061 Sulla viscosita dinamica dei gasie dei vapori. Dynamic viscosity of gases and vapors
Cedegone,Cesare
Atti Accad. Sci. Torino. Classe Sci. Fis. Mat. Nat. 86, 126-28 (1951-2) 1 fig 2 tab 6 ref
CA 48-8608g MF No. 33-D A3 B5 C1 D1 E2 F7 G1
*gas, *hydrocarbon, *helium, *argon, *methane, *propane, *viscosity, *technical gas, *inert gas, *water, *ammonia, reduced variable, organic halide, sulfur dioxide, carbon

06062 Specific heat of gases at the critical point
Lee,J.F.
Z. angew. Math. u. Phys. 4, 401-4 (1953) 1 tab, 10 ref
CA 48-5581 (b) MF No. 33-F A3 B1 C1 D1 E2 F7 G1
*specific heat, *nitrogen, *carbon dioxide, *oxygen, critical

06063 Les Diagrammes I-S Pour H2, CO, N2, N2 plus 3H2, and CO plus 2H2. I-S Diagrams for H2, CO, N2, N2 plus 3H2, and CO plus 2H2.
Guelperine,N.I. Naiditch,I.M.
Chim. Ind. (Paris) 34, 1011-20, 1279-88 (1935) 12 fig 24 tab 6 ref
MF No. 33-L A3 B2 C7 D1 E2 F7 G1 35
*gaseous, *enthalpy, *entropy, mollier diagram, *hydrogen, *carbon monoxide, *nitrogen;

06064 Molecular weight, density and viscosity of liquified gases
Rudenko,N.S.
Zhur. Tekh. Fiz. 18, 1123-26 (1948) 3 fig 1 tab 11 ref
MF No. 33-M A3 B7 C1 D1 E1 F7 G1
*density, *viscosity, *liquid, *hydrogen, *deuterium, *methane, *ethane, *carbon monoxide, *nitrogen, *oxygen, *argon, chlorine,

06067 Dynamic viscosity of nitrogen and carbon dioxide at high pressures.
Savino,Joseph
Purdue Univ., Lafayette, Ind., Ph. D. Thesis (Jan 1955) 60 pp 12 fig 5 tab 21 ref (Univ. Microfilms, Inc., Ann Arbor, Mich. Publ. No. 11658)
CA 49-11343i MF No. 34-C A3 B1 C2 D1 E1 F9 G7
*viscosity, *nitrogen, *carbon dioxide, high pressure, *gaseous

06068 Warmeleitung in hochverdichteten gasen. Thermal conduction in highly compressed gases
Franck,E.U.
Chem. Ing. Tech. 25, 238-44 (1953)
MF No. 34-X A3 B3 C8 D1 E1 F7 G1
*thermal conductivity, *helium, *hydrogen, *nir, *methane, steam, *ammonia, *organic fluid, ethylene, *gaseous, *carbon dioxide, *oxygen, *nitrogen, *argon, pressure effect

06069 Effect of dissociation on thermodynamic properties of pure diatomic gases.
Woolley,H.W.
Natl. Advisory Comm. Aeronaut., Tech. Note 3270, 1-19 (Jul 1955) 10 fig 10 tab 12 ref
CA 49-11343f MF No. 34-Y A3 B1 C2 D1 E2 F3 G6 55
*enthalpy, *entropy, dissociation, *PVT data, compressibility factor, mollier diagram, *hydrogen, *oxygen, *nitrogen, specific heat, *gaseous

06070 Thermal conductivity of gases at high temperatures.
Rothman,A.J.
Calif. Univ. Lawrence Radiation Lab., Berkeley, Rept. No. UCRL 2339 (1953) 107 pp
CA 48 13308e MF No. 34-Z A3 B1 C2 D1 E1 F6 G6
*nitrogen, *carbon dioxide, *gaseous, *gaseous mixture, *binary system, *thermal conductivity, *argon, *helium

06071 Die Warmeleitfahigkeit von Gasen bei niederen Drucken. The thermal conductivities of gases at low pressures
Wirth,H. Klemenc,A.
Monatsh. Chem. 83, 879-82 (1952) 2 fig 1 tab 2 ref
CA 48-13308d MF No. 35-F A3 B3 C2 D1 E1 F7 G1
*thermal conductivity, *methane, *gaseous, *ethylene, *propane, *argon, *hydrogen, *oxygen, *nitrogen

06072 Determination Des Elements Critiques du Methane. The critical constants of methane
Cardoso,Ettore
Arch. sci. phys. et nat. 36, 97-100 (1913) 1 ref
MF No. 35-S A3 B2 C8 D2 E1 F7 G1
*methene, *critical constants, *gaseous

06073 Viskositat des flussigen Methans and Athylens in Abhangigkeit von der Temperatur. Variation in the viscosity of liquid methane and ethylene with temperature
Rudenko,N.S. Schubnikow,L.W.
Physik.Z. Sowjetunion 8, 179-84 (1935) 2 fig 1 tab 2 ref
MF No. 36-D A3 B3 C1 D1 E1 F7 G1
*viscosity, *liquid, *methane, *ethylene, temperature dependence

06074 Paramagnetic susceptibility of solid oxygen.
Kanda,E. Haseda,T. Otsubo,A.
Sci. Repts. Research Insts. Tohoku Univ. Ser. A 7, 1-5 (1955)
CA 49 12062e MF No. 36-F A3 B1 C5 D1 E1 F7 G1 55
*oxygen, *solidified gas, *magnetic property, magnetic susceptibility, melting point, solid-solid transition, temperature effect

06080 Die schmelzkurven der gase A, Kr, X, CH4, CH3D, CD4, C2H4, C2H6, COS und PH3 bis 200 atm. druck. Der volumensprung beim schmelzen. Melting curves of the gases A, Kr, X, CH4, CH3D, CD4, C2H4, C2H6, COS and PH to 200 atm. pressure. The volume change on melting.
Clusius, K. Weigand, K.
Z. physik. Chem. (Leipzig) B46, No. 1, 1-37 (1940)
MF No. 36-C A3 B3 C2 D1 E1 F7 G1
*melting curve, *gas, *argon, *krypton, *xenon, *methane, *ethane,

06081 The NBS-NACA tables of thermal properties of gases. Vapor pressure of oxygen
Hoge,H.J.
Natl. Bur. Standards, Heat & Power Div., Table 9.50 (Dec 1949) 1 fig 2 tab 1 ref
A3 B1 C7 D1 E2 F2 G6
*oxygen, *vapor pressure, *critical constant, *liquid

06083 The NBS-NACA tables of thermal properties of gases. Vapor pressure of argon
Hoge,H.J.
Natl. Bur. Standards, Heat & Power Div., Table 19.50 (1950) 4 pp 1 fig 3 tab 8 ref
A3 B1 C1 D1 E2 F2 G6
*vapor pressure, *gas, *argon, *boiling temperature, *critical

06084 Critical temperatures, pressures and volumes of hydrogen, deuterium and hydrogen deuteride.
Hoge,H.J. Lassiter,J.W.
J. Res. Natl. Bur. Standards 47, No. 2, 75-79 (Aug 1951) RP 2229
A3 B1 C1 D1 E1 F6 G1
*hydrogen, *deuterium, *hydrogen deuteride, *critical constants

06085 The NBS-NACA tables of thermal properties of gases. Table 7.50. Vapor pressure of three hydrogens.
Hoge,H.J. Powell,R.L.
Natl. Bur. Standards, Heat and Power Div., Table 7.50 (Sept 1950) 2 fig 5 tab 3 ref
A3 B1 C6 D1 E2 F2 G9
*hydrogen, *hydrogen deuteride, *deuterium, *vapor pressure.

06087 Thermodynamic properties of methane
Matthews,C.S. Hurd,C.O.
Trans. Am. Inst. Chem. Eng. 42, 55-78 (1946) 1 fig 2 tab 19 ref
MF No. 42-V A3 B1 C7 D1 E2 F6 G1
*vapor pressure, *density, *enthalpy, *entropy, *methane, *liquid, *gaseous, *PVT data, fugacity, superheated

06091 Compression of solid helium and other condensed gases at low temperature
Stewart,J.W.
Bull. Am. Phys. Soc. 1, 218 (1956) Paper U-7, 1 tab 1 ref
MF No. 49-U A3 B1 C1 D1 E1 F6 G1
*helium, *solidified gas, *hydrogen, *neon, *density, *compressibility, very high pressure

06092 The velocity of sound in liquid nitrogen.
Hirschlaff,Ernst
Proc. Cambridge Phil. Soc. 34, 296-98 (1938) 3 fig 2 ref
MF No. 44-F A3 B1 C7 D1 E1 F7 G1 38
*nitrogen, *velocity of sound, *liquid, *compressibility

06093 Die Berechnung der Schallgeschwindigkeit in Gasen und Flussigkeiten mittels einer neuen Thermischen Austandsgleichung. Computation of velocity of sound in gases and fluids by means of a new thermal equation of state
Hirpan,Joseph
Z. Physik 141, 566-70 (1955) 1 fig 10 ref
MF No. 43-J A3 B3 C8 D1 E2 F7 G1
*equation of state, *velocity of sound, *gaseous, *carbon dioxide, *temperature effect, computation

06095 Thermodynamic properties of N2 at low temperatures and at pressures up to 200 atmospheres.
Gersh,S.Ya. Benjaminovich,O.A.
Kislorod 4, No. 5, 21-26 (1947)
CA 46-8439i MF No. 33-K A3 B7 C7 D1 E2 F7 G1 47
*entropy, *gaseous, *nitrogen, high pressure, T-S diagram, *PVT

06099 Die Spezifischen Warmen Cp und Cv einiger Stoffe im festen, flussigen und hyperkritischen Gebiet zwischen 80 degrees und 320 degrees abs. The specific heats Cp and Cv of some substances in solid, liquid and hypercritical range between 80 degrees and 320 degrees K.
Eucken,A. Hauck,F.
Z. physik. Chem. (Leipzig) 134, 161-77 (1928)
MF No. 49-I A3 B3 C1 D1 E1 F7 G1
specific heat, *thermal property, *solidified gas, *liquid, *argon, *carbon dioxide, *ethane, oxide of nitrogen, chlorine,

06100 Conductibilite Thermoque Des Gas Reels. Thermal conductivity of real gases.
Waelbroeck,F. Lafleur,S. Prigogine,I.
Physica 21, 667-75 (1955) 1 tab 17 ref
CA 50 8275e MF No. 48-O A3 B2 C1 D1 E2 F6 G1
diffusion, dissociation, *thermal conductivity, real gas, theory, absorption, *argon, heat of formation, pressure,

06101 The compressibility of gases VII. Argon in the temperature range 0-600 degrees C and the pressure range 10-80 atmospheres.
Whalley,E. Lupien,Y. Schneider,W.G.
Can. J. Chem. 31, 722-33 (1953)
MF No. 48-Z A3 B1 C1 D1 E1 F7 G1 53
*argon, *equation of state, *gaseous, *compressibility

06103 Equation of state and elasticity of solid argon.
Dobbs,E.R.
J. Chem. Phys. 24, 477-78 (1956)
MF No. 48-L A3 B1 C7 D1 E1 F6 G1 56
*argon, *velocity of sound, *equation of state, *density,

06104 Vitesse des ultrasons et rapport gamma des chaleurs specifiques relatives l'argon et a l'azote sous pression. Velocity of ultrasonic waves and ratio of specific heats gamma in argon and nitrogen under pressure.
Lacam,A. Noury,J.
Compt. rend. 236, 2039-41 (1953)
CA 49-9340 h MF No. 47-Y A3 B2 C2 D1 E1 F7 G1
*velocity of sound, specific heat ratio, *argon, *nitrogen,

06105 Constantes Thermodynamiques des Gas aux Temperatures Elevees. Thermodynamic constants of gases at high temperatures.
Ribaud,M.G.
Publ. Sci. Tech. Min. Air (France) No. 266, 1-169 (1952)
MF No. 47-S A3 B2 C7 D1 E2 F7 G1
*air, *oxygen, *nitrogen, *ammonia, *gaseous, *hydrogen, *helium, *argon, *carbon monoxide, *ethane, *methane, *specific heat, *carbon dioxide, *water, *ethylene, *acetylene, *critical constant, *inorganic fluid, sulfur dioxide, oxide of nitrogen, *specific heat, hydrogen chloride

06106 Zur Temperaturabhangigkeit der Warmeleitfahigkeit einger Gase. The temperature dependance of the thermal conductivity of a few gases
Franck,E.U.
Z. Elektrochem. 55, 636-43 (1951) 13 tab 41 ref
CA 46-4296a MF No. 47-O A3 B3 C1 D1 E2 F7 G1
temperature effect, *carbon dioxide, *nitrogen, *oxygen, *air, *helium, chlorine, *gaseous, *fluorine, *argon, *xenon, bromine, iodine, *thermal conductivity

06109 Les Equations d'etate et les Proprietes Thermodynamiques des gaz Comprimes. Equations of state and the thermodynamic properties of compressed gases
Saurel,J.
Genie chim. 79, No. 1, 12-22, 41-51 (Jan 1958) 17 fig 1 tab
CA 1958-12491c MF No. 46-W A3 B2 C8 D3 E1 F7 G1
*gaseous, *specific heat, *nitrogen, *carbon monoxide, *ethane, *enthalpy, *entropy, *internal energy, *free energy, *carbon dioxide, *joule-thomson coefficient, inversion curve, *density

06110 Uber die Zahigkeit von Gasen und Gasgemischen bei hoheren Temperaturen. On the viscosity of gases and gaseous mixtures at high temperatures.
Schaid,Christoph
Gas-u. Wasserfach 85, 92-103 (1942)
MF No. 48-Q A3 B3 C2 D1 E2 F7 G1
*gaseous mixture, *gas, *air, *carbon dioxide, *carbon monoxide, *methane, *ethylene, *nitrogen, *hydrogen, *viscosity, high temperatures, *oxygen, *gaseous

06112 Uber den Quanteneffekt bei einatomigen Gasen und Flussigkeiten. On the quantum effect in monatomic gases and fluids.
Eucken,A.
Deut. Akad. Wiss. Berlin 22, 682-93 (1914).
MF No. 52-L A3 B3 C6 D1 E1 F7 G1
*specific heat, *hydrogen, *helium, *gaseous, temperature effect,

06113 Die Molekularwarme des Wasserstoffs bei tiefen Temperaturen. Molecular heats of hydrogen at low temperatures.
Eucken,A.
Sitzber. kgl. preuss. Akad. Wiss. 5, 141-51 (1912)
MF No. 52-K A3 B3 C6 D1 E1 F7 G1
*specific heat, temperature effect, *hydrogen, *gaseous

06114 I. Calori Specifici Di Alcuni Gas Alle Alte Temperature. Specific heats of some gases at high temperatures.
Pace,Nicola
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MF No. 52-P A3 B5 C2 D1 E F7 G1
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*helium, *solidified gas, *liquid, *melting curve, *entropy, *vapor pressure, *viscosity, *specific heat, *phase diagram,

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MF No. 65-D A3 B7 C8 D1 E1 F7 G1 47
*oxygen, *nitrogen, *gaseous, *gaseous mixture, *binary system, *PVT data, compressibility factor

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*air, *carbon dioxide, *nitrogen, *ammonia, *organic fluid, inorganic fluid, electric field, ethyl chloride, acetone, *thermal conductivity

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*thermometry, *calorimetry, *specific heat, *air, *carbon dioxide, *ethane, *gaseous, *deutero compound

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Edmister,W.C.
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*methane, *entropy, *enthalpy, *gaseous, *specific heat, *mollier diagram, *saturated vapor

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Chase,C.E.
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Ind. Eng. Chem. 34, 174-82 (1942) 5 fig 2 tab 11 ref
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*ammonia, *oxygen, *ethane, *refrigerant, *liquid, *water, *carbon dioxide, sulfur dioxide, *vapor pressure

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*helium, *liquid, helium II, *viscosity

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*thermodynamic property, *helium, *hydrogen, *neon, *argon, *air, *carbon dioxide, expansion coefficient, pressure coefficient,

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MF No. 69-M A3 B1 C1 D2 E2 F6 G1
*thermodynamic properties, *liquid, *neon, *specific heat, law of corresponding states, melting point, enthalpy, entropy, argon

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Su,Gouq-Jen Chang,Chien How
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*equation of state, *nitrogen, *helium, *neon, *argon, *oxygen, *air, carbon dioxide, *methane, *ethane, *butane,

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De Boer,J.
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*boiling temperature, *nitrogen, *carbon monoxide, binary system,

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*gaseous mixture, *oxygen, *nitrogen, *liquid mixture, *phase equilibrium, binary system, isotherm, *vapor pressure

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*nitrogen, *equation of state, isotherms, *gaseous, *PVT data

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*specific heat, *hydrocarbon, *gas, *butane, *ethane, *carbon dioxide, *deuterium, *carbon monoxide, *methane, *nitrogen, *water, *oxygen, spectroscopic data, halides

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*argon, *neon, *helium, *nitrogen, *oxygen, *hydrogen, *specific heat, thermal conductivity, accommodation coefficient, *gaseous

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Prigogine,I. Waelbrock,F.
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*hydrocarbon, *viscosity, *liquid, *halogen, *oxygen, *nitrogen, *ammonia, *inorganic compound, organic halide,

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CA 35-77823 MF No. 71-L A3 B2 C1 D1 E1 F7 G1
*hydrogen, *deuterium, *viscosity, *liquid, *hydrogen, argon,

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Tsederberg,N.V.
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CA 51-13551 MF No. 132-L A3 B7 C1 D1 E F7 G1
*thermal conductivity, *viscosity, *hydrogen, *water, *methane, *nitrogen, *oxygen, *carbon dioxide, ethylene, specific heat, *compressed gas

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*entropy, *nitrogen, *hydrogen, *gaseous, entropy change, high pressure, *carbon monoxide

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*hydrogen, *entropy, *gaseous, normal hydrogen, zero point energy,

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*gaseous, *helium, *hydrogen, *argon, *oxygen, nitrogen, *carbon monoxide, *heat of vaporization, *melting temperature, *specific heat, *phase transition property, *liquid,

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*oxygen, *nitrogen, *heat of vaporization, *liquid, *temperature

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*hydrogen, *PVT data, compressibility factor, isotherm, *gaseous, *helium, *argon, *neon, second virial coefficient, *ammonin, *nitrogen, *oxygen, *equation of state, virial coefficient;

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*viscosity, *gaseous, temperature effect

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*neon, *vapor pressure, *solidified gas, equation

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Kane,Gabriel
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*neon, *heat of vaporization, *critical region, equation

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*velocity of sound, *hydrogen, *para hydrogen, dispersion

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Din,F.
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*liquid mixture, *gaseous mixture, *argon, *oxygen, *vapor pressure, composition, *phase equilibrium

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*nitrogen, *gaseous, *equation of state, benedict-webb-rubin equation, *gaseous, PVT data, vapor pressure, critical constants, joule-thomson coefficient, second virial coefficient, enthalpy;
A3 B1 C7 D1 E1
*nitrogen, *methane, *liquid mixture, *gaseous mixture, *binary system, *phase equilibrium, liquid-vapor equilibrium, equilibrium constant, *equation of state

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*hydrogen, *solidified gas, *heat of sublimation, *vapor pressure, virial coefficient, second virial coefficient, *equation of state

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*oxygen, *specific heat, *solidified gas, temperature effect

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Clusius,Klaus
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*nitrogen, *oxygen, *hydrogen, *carbon monoxide, *methane, hydrogen chloride, *specific heat.

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Grunmach,Leo
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MF No. 83-X A3 B3 C7 D2 E2 F7 G1
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*triple point, *argon, *oxygen, *solidified gas, *vapor pressure, *boiling temperature

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*methane, *critical temperature

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*para hydrogen, *deuterium, ortho deuterium, *solidified gas, *specific heat, lattice parameter, debye constant, temperature

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Clusius,K. Bartholome,E.
Z. Tech. Physik 15, 545-47 (1934)
MF No. 74-P A3 B3 C6 D1 E1 F7 G1
*hydrogen, *deuterium, *melting curve, melting temperature, *triple point, *heat of fusion, *liquid, *density, debye constant, *solidified gas, *specific heat. zero point energy

06424 Thermodynamic properties of oxygen, nitrogen and air at low temperatures.
Claitor,L.C. Crawford,D.B.
Trans. Am. Soc. Mech. Engrs. 71, 885-95 (Nov 1949)
MF No. 37-R A3 B1 C7 D1 E2 F6 G1
*oxygen, *gaseous, *PVT data, *density, *equation of state, second virial coefficient, *velocity of sound, *reduced variable, *critical constants, *heat of vaporization, compilation, entropy, *air, *joule-thomson coefficient, *enthalpy, compressibility factor, *specific heat, calculation. *nitrogen. third virial

06432 The density, compressibility and atomic weight of neon.
Baxter,G.P. Starkweather,H.W.
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MF No. 63-P A3 B1 C1 D1 E1 F6 G1
*neon, *density, *gaseous, *PVT data, compressibility factor,

06497 Technical data (pertaining to air, its liquefaction and distillation).
Lobo,W.E.
M. W. Kellogg Co., Final Rept. OSRD No. 4206 (Oct 1944)
Contr. No. OEM-sr-365, 52 pp 52 fig
MF No. 130-P A3 B1 C7 D1 E2 F8 G5
*nitrogen, *argon, *oxygen, *helium, *carbon dioxide, *air, *entropy, *enthalpy, *T-S diagram, *density, *vapor pressure, *viscosity, *liquid, *thermal conductivity, *phase equilibrium,

06533 Specific heats of solid argon and an equimolar argon-krypton mixture
Figgins,B.F.
Proc. Phys. Soc. (London) 76, 732-6 (1960) 2 fig 2 tab 22 ref
CA 55 4135e MF No 14-L A3 B1 C6 D1 E1 F7 G1
*argon, *solidified gas, *specific heat, *solid solution, *rare gas, krypton, *debye constant, temperature effect

06560 A tabulation of the thermodynamic properties of normal hydrogen from low temperatures to 300 degrees K and from 1 to 100 atmospheres
Dean,J.W.
Natl. Bur. Standards Tech. Note No. 120 (Nov 1961) 71 pp 1 fig 6 ref
A3 B1 C6 D1 E2 F4 G6
*hydrogen, normal hydrogen, *gaseous, *entropy, *enthalpy,

06565 Critical densities and related properties of liquids.
Denson,S.W.
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MF No. 63-Q A3 B1 C1 D1 E2 F6 G1 48
*liquid, *critical constant, *inorganic compound., *hydrocarbons, reduced variables, law of corresponding states, law of rectilinear diameters, dipole moment, organic compound, abnormal liquids, critical volume;

06573 Atomwarmen und Schmelzwarmen von Neon, Argon, and Krypton. Atomic heat and heat of melting of neon, argon and krypton.
Clusius,Klaus
Z. physik. Chem. (Leipzig) B31, 459-74 (1936)
MF No. 63-R A3 B3 C6 D1 E1 F7 G1
*rare gas, *specific heat, *neon, *argon, krypton, *heat of fusion, atomic heat, *triple point, *solidified gas, *liquid

06580 Benedict equation of state, application to vapor liquid equilibrium.
Cullen,E.J. Kobe,K.A.
Am. Inst. Chem. Engrs. J. 1, No. 4, 452-55 (1955)
MF No. 109-T A3 B1 C1 D1 E2 F6 G1
*equation of state, *carbon dioxide, *propane, *gaseous mixture, *vapor pressure, pressure, binary system

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Crommelin,C.A.
Physik. Ber. 4, 702 (1923)
MF No. 64-P A3 B2 C6 D2 E2 F7 G1
*neon, *density, *gaseous, critical densitv

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Duclaux,J.
J. Chim. Phys. 50, 113-16 (1953)
MF No. 41-M A3 B2 C7 D3 E2 F7 G1 53
*argon, *oxygen, *neon, *gaseous, *reduced variables, law of corresponding states, virial coefficient

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Olzewski,K.
Phil. Mag. 40, 202-10 (1895) 2 fig 2 tab 8 ref
MF No. 207-N A3 B1 C1 D1 E1 F6 95
*hydrogen, *critical constant, *boiling point, *gaseous,

06610 On the critical temperature of hydrogen and the theory of adiabatic expansion in the neighborhood of the critical point.
Natanson
Phil. Mag. 40, 272 (1895)
A3 B1 C1 D1 E F6 G1 95
*hydrogen, *critical constant, expansion, theory

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Natanson
Z. physik. Chem. (Leipzig) 17, 43 1895)
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*hydrogen, critical constant

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Dewar,James
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MF No. 129-N A3 B1 C1 D1 E1 F7 G1
*oxygen, *nitrogen, *liquid, *density, boiling temperature

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Giauque,W.F.
J. Am. Chem. Soc. 52, 4816-31 (1930) 9 tab 32 ref
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*hydrogen, *ortho para hydrogen, *entropy, *orthohydrogen, *free energy, *specific heat, *para hydrogen, *geseous, ideal

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Eucken,A. Schroder,E.
Ann. Physik 36, 609-20 (1939)
A3 B3 C7 D1 E1 F7 G1
*inorganic fluid, hydrogen bromide, *organic fluid, benzene, *carbon dioxide, oxide of nitrogen, *solidified gas, *thermal conductivity, temperature effect

06620 On the pressures of saturation of oxygen
Estreicher,Thaddeus
Phil. Mag. 40, 454-63 (Jun 1895) 1 fig 7 tab 17 ref
MF No. 129-V A3 B1 C7 D1 E1 F6 G1
*oxygen, *vapor pressure, *liquid, law of corresponding states, ethylene, water

06621 The boiling point and density of liquid hydrogen.
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*boiling temperature, *density, *hydrogen, *liquid

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*boiling temperature, *hydrogen, vapor pressure, *liquid,

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Dewar,J.
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A3 B1 C6 D1 E1 F7 G1 99
*boiling temperature, *hydrogen, *liquid

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Woolley,H.W.
Natl. Advisory Comm. Aeronaut. Tech. Note No. NACA TN 3271 (1956) 114 pp 13 fig 20 tab 94 ref
MF No. 111-R A3 B1 C7 D1 E2 F3 G6
*nitrogen, prandtl number, *density, *enthalpy, *entropy, *gaseous, *specific heat, *vapor pressure, *solidified gas, *liquid, *PVT data, *velocity of sound, *viscosity, *thermal conductivity

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Otto,J. Holborn,L.
Z. Physik 10, 367-76 (1922)
MF No. 110-M A3 B3 C1 D1 E1 F7 G1
isotherm, *nitrogen, *oxygen, *helium, *gaseous, *PVT data,

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Mathias,E. Crommelin,C.A. Onnes,H.K.
Ann phys. 19, 231-39 (1923)
MF No. 41-L A3 B2 C6 D1 E1 F7 G1
*neon, *density, *critical constant, *liquid, *gaseous, law of rectilinear diameter, temperature effect, saturated vapor

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Goff,J.A. Gratch,S.
Trans. ASME 72, 741-49 (1950)
MF No. 110-K A3 B1 C8 D1 E1 F6 G1 59
*gaseous, *entropy, *specific heat, *enthalpy, zero pressure, *nitrogen, *carbon monoxide

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A. I. Ch. E. Journal 1, No. 1, 74-77 (1955)
MF No. 109-S A3 B1 C7 D1 E2 F6 G1
*neon, *argon, *carbon monoxide, *methane, *gaseous, *equation of state, intermolecular force, *critical constants, *PVT data, *reduced variable, law of corresponding states,

06705 An experimental determination of the velocity of sound in dry CO2 free air and methane at temperatures below the ice point
Quigley,T.H.
Phys. Rev. 67, No. 9 & 10, 298-303 (1945)
MF No. 119-I A3 B1 C1 D1 E1 F6 G1
*velocity of sound, *air, *methane, cryogenic temperature

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A.I.Ch.E. Journal 5, No. 2, 159-60 (1959)
MF No. 79-F A3 B1 C1 D1 E2 F6 G1 59
*equation of state, *carbon dioxide, *gaseous

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Holborn, L. Otto,J.
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*helium, *hydrogen, *neon, isotherm, *PVT data, *gaseous

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Guggenheim,E.A. McGlashan,M.L.
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MF No. 109-J A3 B1 C8 D1 E2 F6 G1
*nitrogen, *oxygen, *gaseous mixture, *binary system, *PVT data, *equation of state, virial coefficient, second virial coefficient, *hydrogen, *argon, *carbon monoxide, *methane, *ethane, *butane, *helium, *neon

06721 The critical temperature and critical pressure of nitrogen.
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MF No. 106-O A3 B1 C7 D1 E1 F6 G1 51
*nitrogen, *gaseous, *PVT data, isotherm, critical region,

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Taylor,R.D. Dash,J.G.
Phys. Rev. 106, No. 3, 398-403 (1957)
MF No. 112-W A3 B1 C1 D1 E1 F6 G1
*helium, *liquid, helium 3, helium 4, *viscosity, temperature effect

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Prausnitz,J.M. Benson,P.R.
A.I.Ch.E. Journal 5, No. 2, 161-64 (1959)
MF No. 65-U A3 B1 C2 D1 E1 F6 G1 59
*inorganic fluid, carbon tetrachloride, *hydrogen, *gaseous mixture, *liquid mixture, *binary system, *phase equilibrium, solubility, vapor-liquid equilibrium, second virial coefficient;

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Liley,P.E.
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*transport property, eucken factor, *gaseous, *air, *nitrogen, *oxygen, *hydrogen, *methane, *carbon dioxide, *argon, *helium, *neon, krypton, xenon

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Dechema Monograph 32, 74-82 (1959) 8 fig 1 tab 39 ref TPRC Translation by Mrs. J.K. Gerritsen (Oct 29, 1959)
CA 50 75626 A3 B1 C7 D1 E1 F8 G5
*thermal conductivity, *nitrogen, *oxygen, *argon, *liquid, *gaseous, *critical region, critical density, temperature

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Frost,A.V.
Bull. Acad. Sci. RUSS (3-4) 21-5 (1942) (TPRC Translation by Mrs. J.K. Gerritsen, Oct 1959)
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*hydrocarbon, *viscosity, *ethane, *propane, *organic chemical.

06759 The vapor pressure of nitrogen and hydrogen at low pressures.
Borovik,E.S. Grishin,S.F. Grishina,E.Ya.
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MF No. 146-N A3 B1 C5 D1 E1 F6 G1
*nitrogen, *hydrogen, *solidified gas, *vapor pressure, temperature effect, low pressure

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Kinoshita,M. Oishi,J.
Phil. Mag. 24, 52-62 (1937)
MF No. 123-I A3 B1 C8 D1 E1 F6 G1 37
*nitrogen, *hydrogen, *helium, *neon, *expansivity, *compressibility, *gaseous

06768 Density and compressibility of solid hydrogen and deuterium at 4.2 degrees K.
Megaw,H.D. Simon,F.
Nature 138, 244 (1936)
MF No. 123-R A3 B1 C1 D1 E1 F7 G1 36
*hydrogen, *deuterium, *solidified gas, *density, *compressibility

06772 Isotherms of di-atomic substances and their binary mixtures. XXIX. On the behaviour of nitrogen according to the law of corresponding states.
van Urk,A.Th.
Communs. Kamerlingh Onnes Lab. Univ. Leiden No. 169-e, 47-60 (1924) 2 fig 8 tab 5 ref
MF No. 124-F A3 B1 C7 D1 E2 F7 G1
*nitrogen, *gaseous, *equation of state, virial coefficient, second virial coefficient, third virial coefficient, *PVT data,

06773 Further experiments with liquid helium. Isotherms of monatomic substances and their binary mixtures. XXIV. Isotherms of helium at 4.2 degrees K and lower. The variation of density of liquid helium below the boiling point.
Onnes,H.K. Boks,J.D.A.
Communs. Phys. Lab. Univ. Leiden No. 170-B (1924)
MF No. 123-G A3 B1 C5 D1 E1 F7 G1
*helium, *liquid, *density, temperature effect, *gaseous, *PVT data, compressibility factor, isotherm

06774 Isotherms of monatomic substances and their binary mixtures. XXIII. Isotherms of helium from 20 degrees to -259 degrees C.
Boks,J.D.A Onnes,H.K.
Communs. Kamerling Onnes Lab. Univ. Leiden No. 170-a (1924) 9 pp 5 tab 11 ref
MF No. 50-P A3 B1 C6 D1 E1 F7 G1
*helium, isotherm, *gaseous, *density, *PVT data, compressibility

06776 Isotherms of mon-atomic substances and their binary mixtures. XXV. The same of di-atomic substances. XXXI. the compressibility of hydrogen and helium-gas between 90 degrees and 14 degrees K.
Van Agt,F.P. Onnes,H.K.
Communs. Phys. Lab. Univ. Leiden No. 176-b (1925) 15 pp 5 fig 13 tab
MF No. 115-V A3 B1 C1 D1 E1 F7 G1 25
*hydrogen, *helium, *isotherm, *gaseous mixture, binary system, *compressibility, virial coefficient

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Michels,A. Schamp,H.W. DeGraaff,W.
Physica 20, 1209-14 (1954)
MF No. 123-U A3 B1 C8 D1 E1 F6 G1 54
*oxygen, *PVT data, compressibility factor, isotherm, pressure effect

06788 Isothermes de l'helium entre -205 degrees C et -258 degrees C. Isotherms of helium between -205 degrees C and -258 degrees C.
Penning,F.M. Onnes,H.K.
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MF No. 124-D A3 B2 C6 D1 E1 F7 G1
*helium, *gaseous, *PVT data, compressibility factor,

06792 Compressibilites of ozone, oxygen and ozone-oxygen mixtures and the thermodynamic quantities for pure ozone.
Birdsall,C.M. Jenkins,G.C. DiPaolo,F.S. et al.
J. Chem. Phys. 23, 441-52 (1955)
MF No. 123-F A3 B1 C1 D1 E2 F6 G1 55
compressibility, oxygen, ozone, *gaseous mixture

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MF No. 122-R A3 B1 C8 D1 E1 F7 G1 15
*hydrogen, isotherm, *gaseous, *PVT data, pressure effect

06803 Isotherms of monatomic gases and their binary mixtures I. Isotherms of helium between 100 degrees C and -217 degrees C.
Onnes,H.K.
Communs. Phys. Lab. Univ. Leiden No. 102-A (1907)
MF No. 123-H A3 B1 C7 D1 E2 F7 G1
*helium, *gaseous, *PVT data, compressibility factor, *density, virial coefficient, second virial coefficient,

06804 Isotherms of monatomic gases and their binary mixture II. Isotherms of helium at -253 degrees C and -259 degrees C.
Onnes,H.K.
Communs. Phys. Lab. Univ. Leiden No. 102-C (1908)
MF No. 125-K A3 B1 C6 D1 E1 F7 G1
*helium, *gaseous, *PVT data, compressibility factor,

06805 Isotherms of di-atomic substances and their binary mixtures. XXVI. On the behaviour of oxygen according to the law of corresponding states.
Kuypers,H.A.
Communs. Kamerlingh Onnes Lab. Univ. Leiden No. 169t, 13-19 (1924) 1 fig 3 tab 10 ref
MF No. 122-B A3 B1 C7 D1 E2 F7 G1
*oxygen, isotherm, *gaseous, *equation of state, virial coefficient, second virial coefficient, *PVT data, law of corresponding states, third virial coefficient. *reduced

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Van Itterbeek,A. Zink,J.
Appl. Sci. Research 7a, 375-85 (1958)
MF No. 118-W A3 B1 C2 D1 E1 F6 G1 58
*oxygen, *gaseous, *velocity of sound, high pressure, interferometer, specific heat ratio

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Bar,R.
Nature 135, 153 (1935)
MF No. 116-Q A3 B1 C1 D1 E2 F7 G1 35
*oxygen, *velocity of sound, *compressibility, *liquid,

06812 The velocity of sound in gaseous helium in connection with the virial coefficients.
Walstra,W.K.
Physica 13, 643-52 (1947)
MF. No. 117-I A3 B1 C1 D1 E3 F6 G1 47
*velocity of sound, *helium, *equation of state,

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Koeppe,W.
Kaltetechnik 9, 30-31 (1957)
MF No. 113-B A3 B3 C6 D1 E2 F7 G1
*hydrogen, *specific heat, *gaseous, calculation

06814 Isotherms of diatomic substances and their binary mixtures XXVI. On the isotherms of oxygen at 20 degrees, 15.6 degrees and 0 degree C.
Van Urk,A.T. Nijhoff,G.P.
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MF No. 123-Y A3 B1 C8 D1 E1 F6 G1 24
*oxygen, isotherm, *PVT-data, *gaseous

06815 Isotherms of diatomic substances and their binary mixtures XXVIII. On the isotherms of nitrogen at low temperatures.
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MF No. 121-P A3 B1 C7 D1 E1 F7 G1 24
*nitrogen, isotherms, *gaseous, *PVT data, compressibility factor,

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Tucker,W.S.
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MF No. 116-L A3 B1 C2 D1 E1 F6 G1 43
*air, *hydrogen, *water, carbon dioxide, *velocity of sound, viscosity, density, acetone, *gaseous, *organic fluid, ether

06838 Thermodynamic properties of hydrogen and deuterium at temperatures between -175 degrees C and 150 degrees C and at densities up to 640 amagat.
Michels,A. De Graaff,W. Wolkers,G.J.
Physica 25, 1097-1124 (1959)
A3 B1 C1 D1 E2 F6 G1
*hydrogen, *deuterium, *entropy, *free energy, *enthalpy, *specific heat, *velocity of sound, *joule-thomson coefficient

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Michels,A. DeGraaff,W. Wassenaar,T. Levelt,J.M.H. Louwerse,P.
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MF No. 101-J A3 B1 C7 D1 E1 F6 G1 59
*hydrogen, *deuterium, isotherm, *gaseous, *PVT data,

06841 Measurements of the velocity of sound in air, nitrogen, and oxygen with special reference to the temperature coefficients of molecular heats.
Shilling,W.G. Partington,J.R.
Phil. Mag. 6, 920-39 (1928)
MF No. 117-0 A3 B1 C2 D1 E1 F6 G1
*velocity of sound, *specific heat, *air, *nitrogen, *oxygen,

06849 Temperature dependence of the heat of evaporation of a non-associated liquid
Rykov,V.I.
J. Phys. Chem. U.S.S.R. 34, No. 8, 881-2 (Aug 1960)
Abst. Ref. Am. Rocket Soc. J. 32, No. 3, 499 (Mar 1962)
A3 B1 C7 D E3 F7 G1
*nitrogen, *argon, *liquid, *heat of vaporization,

06852 Measurement of very low temperatures. XXX. Comparison of helium, nitrogen, argon, oxygen and neon thermometers with the hydrogen thermometer. Corrections which will reduce the indications of these thermometers to the international scale of Kelvin. The second virial coefficients for helium, argon, neon, oxygen and nitrogen below 0 degrees C.
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Arch. Neerl. sci. 6, 1-30 (1922) Comms. Phys. Lab. Univ. Leiden No. 156A (1922)
MF No. 123-Z A3 B2 C7 D1 E F7 G1 22
*nitrogen, *oxygen, *neon, *argon, *critical constant, *hydrogen, *equation of state, *gaseous, second virial coefficient;

06853 Second virial coefficients and specific heats of oxygen.
Van Lammeren,J.J.
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MF No. 15-J A3 B1 C7 D1 E1 F6 G1
*oxygen, *specific heat, *equation of state, *PVT data, second virial coefficient, *velocity of sound, specific heat

06854 Pressure-density-temperature relationship of liquid O2.
Tkachenko,E.A.
Am. Rocket Soc. J. 30, 566-68 (1960)
A3 B1 C7 D1 E1 F6 G1
*oxygen, *liquid, *PVT data, *density, *thermodynamic property, *equation of state, space application, *compressibility

06912 Memoires sur L'Elasticite et La Dilatobilite Des Fluides Jusqu'aux Tres Hautes Pressions. Reports on the elasticity and expansivity at very high pressures.
Amagat,E.H.
Ann. chim. et phys. 29, 68-136 (1893)
MF No. 121-G A3 B2 C8 D E1 F7 G1
*oxygen, *hydrogen, *nitrogen, *air, *inorganic fluid, *PVT data, compressibility factor, *density, isotherm,

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Bartlett,E.P. Cupples,H.L. Tremearne,T.H.
J. Am. Chem. Soc. 50, 1275-88 (1928)
MF No. 121-I A3 B1 C8 D1 E1 F6 G1 28
*hydrogen, *nitrogen, *PVT data, compressibility factor, *gaseous,

06917 Investigaciones Experimentales Sobre Gases Relacionadas Con El Metodo De Las Densidades Limites Y La Determinacion Rigurosa De Masas Moleculares Y Atomicas. I. Resultados Obtenidos Para El O2 Y El SO2: Masa Atomica Del Azufre. Experimental investigations of gases based on density limits and the rigorous determination of molecular and atomic masses. I. Results on oxygen and SO2: The atomic mass of sulfur.
Batuecas,T. Malde,G.G.
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MF No. 121-K A3 B3 C2 D1 E1 F7 G1
*oxygen, *gas, *density, *compressibility, sulfur dioxide,

06920 Compressibility at 0 degrees and above 1 atmosphere and departure from Avogadro's law of several gases. IV Carbon monoxide and nitrogen.
Batueças,T. Schlootter,C. Maverick,G.
J. Chim. Phys. 26, 548-55 (1929)
MF No. 121-L A3 B2 C8 D1 E1 F7 G1 29
*PVT data, compressibility factor, pressure effect

06923 Density, compressibility and atomic weight of argon.
Baxter,G.P. Starkweather,H.W.
Proc. Natl. Acad. Sci. U.S. 14, 57-63 (1928)
MF No. 121-M A3 B1 C2 D E1 F6 G1
*argon, *density, *gaseous, *PVT data, compressibility factor, *physical property, atomic weight

06924 Density, compressibility and atomic weight of argon I.
Baxter,G.P. Starkweather,H.W.
Proc. Natl. Acad. Sci. U.S. 15, 441-44 (1929)
MF No. 121-N A3 B1 C2 D1 E1 F6 G1
*argon, *density, *gaseous, *PVT data, compressibility factor,

06926 A new equation of state for fluids.
Beattie,J.A. Bridgeman,O.C.
Proc. Am. Acad. Arts Sci. 63, 229-308 (1928)
MF No. 121-O A3 B1 C6 D1 E1 F6 G1 28
*equation of state, *helium, *neon, *argon, *hydrogen, *nitrogen, *oxygen, *air, *carbon dioxide, *methane, *gaseous, beattie-bridgeman equation, *PVT data, *density

06927 A new equation of state for fluids. II. Application to helium, neon, argon, hydrogen, oxygen and methane.
Beattie,J.A. Bridgeman,O.C.
J. Am. Chem. Soc. 50, 3133-38 (1928)
MF No. 121-Q A3 B1 C8 D1 E1 F6 G1 28
*helium, *neon, *argon, *hydrogen, *nitrogen, *oxygen, *air, *carbon dioxide, *methane, *gaseous, *equation of state,

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*gaseous mixture, *binary system, *argon, *oxygen, *ethylene, *equation of state, beattie-bridgman equation, *PVT data, calculation, *hydrogen, *nitrogen, *carbon monoxide, *methane,

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MF No. 110-L A3 B1 C2 D1 E3 F6 G1 40
*equation of state, *helium, *neon, *argon, *hydrogen, *nitrogen, *oxygen, *air, *carbon dioxide, *ammonia, *methane, *ethane,

06936 Ultraschallgeschwindigkeiten in Stickstoff, Stickoxyd und Kohlenoxyd zwischen 20 und 200 degrees C, gemessen mit einem neuen Verfahren. The ultrasonic velocity of sound in nitrogen, nitric oxide, and carbon dioxide between 20 degrees to 200 degrees C, measured by a new method
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MF No. 116-S A3 B3 C8 D1 E1 F7 G1
*velocity of sound, *gaseous, *nitrogen, *carbon dioxide,

06939 An empirical equation for thermodynamic properties of light hydrocarbons and their mixtures I. Methane, ethane, propane and n-butane
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*equation of state, *thermodynamic properties, *gaseous mixture, *hydrocarbon, *liquid, *ethane, *methane, *propane, *butane,

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ASTIA AD 5522 A3 B1 C1 D1 E3 F5 G5
*equation of state, *gaseous, *liquid, intermolecular force, *transport property, *reduced variable, law of corresponding states, *helium, *hydrogen, *deuterium, *neon, *argon, *nitrogen, *oxygen, **air, *rare gas, *carbon monoxide, *carbon dioxide, oxide of nitrogen, *methane, *fluorine,

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*compressibility, *binary system, *mixture, *methane, *propane,

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*velocity of sound, *argon, *nitrogen, *oxygen, *air, pressure effect, low pressure, *gaseous

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MF No. 121-Y A3 B1 C2 D1 E1 F6 G1
*gaseous, *compressibility, *equation of state, *hydrogen, *helium, *ammonia, *nitrogen, *argon, very high pressure

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*nitrogen, *argon, *melting curve, compressibility, *liquid, *density, *heat of fusion;

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*gaseous mixture, *hydrogen, *nitrogen, *viscosity, *binary system, *thermal conductivity, *specific heat, *density, equation, prandtl number, *transport property;

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*helium, *neon, compressibility factor, *PVT data, isotherm

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*oxygen, *liquid, *compressibility, kerosene

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*velocity of sound, *liquid, *helium, relaxation time, *physical

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*argon, *oxygen, *carbon monoxide, *nitrogen, *methane, *liquid, *viscosity, *thermal conductivity, temperature effect, *reduced

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*argon, *solidified gas, *specific heat, *expansivity, *compressibility, equation, calculation, *equation of state, intermolecular force

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*nitrogen, *viscosity, *gaseous, pressure effect, very high pressure

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*gas, *velocity of sound, *argon, *specific heat, *ratio, *nitrogen, *air, *carbon dioxide, *methane, *ethane, high

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*velocity of sound, *gas, *carbon dioxide, temperature effect

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*nitrogen, *oxygen, *helium, *gaseous, *PVT data, compressibility factor, *equation of state, virial coefficient, second virial

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*argon, *density, *compressibility, atomic weight, *gaseous

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*expansivity, *gaseous, *hydrogen, *nitrogen, *carbon monoxide, *methane, *ethane, *carbon dioxide, *organic chemical,

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*equation of state, gaseous mixture, hydrogen, nitrogen, helium, neon, virial coefficient, second virial coefficient,

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Schweikert,G.
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*argon, *solidfied gas, *equation of state, apparatus

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*velocity of sound, *argon

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*absorption, sound absorption, *oxygen, *velocity of sound, *gaseous

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virial coefficient, second virial coefficient, *equation of state, *specific heat, *oxygen, *liquid, *neon, *velocity of sound

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*specific heat, specific heat ratio, *equation of state, *helium, *velocity of sound, *gaseous

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*hydrogen, *nitrogen, *gaseous mixture, *binary system, second virial coefficient, third virial coefficient, high pressure, isotherm, *PVT data, compressibility factor, *equation of state

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MF No 124-W A3 B1 C2 D1 E1 F6 G1
*compressibility factor, pressure, *hydrogen, *nitrogen, *gaseous mixture, apparatus, *PVT data

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*velocity of sound, *gaseous, *oxygen, *hydrogen, *nitrogen,

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*air, *carbon dioxide, *carbon monoxide, oxide of nitrogen, *ethylene, *ammonia, *specific heat, *viscosity, *thermal conductivity, *gaseous

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Zartman,I.F.
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*velocity of sound, *air, *carbon dioxide, *nitrogen, *hydrogen,

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*equation of state, Joule-thomson coefficient, *inert gas, *nitrogen, *methane, *carbon dioxide, *oxygen, *carbon monoxide,

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Albright,L.F. Martin,J.J.
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*fluorinated refrigerant, *thermodynamic properties, *vapor pressure, *density, *specific heat, freon 13

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*equation of state, high pressure, *argon, *carbon dioxide, *carbon monoxide, *helium, *hydrogen, krypton, *nitrogen, *neon, *oxygen, xenon, *rare gas, *gaseous

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*nitrogen, *air, *velocity of sound, *specific heat, *gaseous

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*methane, *entropy, *free energy, equation, *gaseous

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A3 B1 C2 D E3 F6 G1 23
*hydrogen, *nitrogen, *carbon monoxide, *entropy, *gaseous, *inorganic fluid, oxide of nitrogen, hydrogen bromide, hydrogen

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*specific heat, *nitrogen, pressure effect, *gaseous, *velocity of sound

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PVT data, *gaseous mixture, *methane, *nitrogen, *hydrogen, *compressibility

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*oxygen, *velocity of sound, *gaseous, *specific heat

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*ortho-para hydrogen, *viscosity, *gaseous, *hydrogen, normal hydrogen, *parahydrogen, temperature effect

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*thermal conductivity, krypton, *argon, *neon, *helium, *hydrogen, *methane, *nitrogen, *carbon monoxide, *oxygen, *gaseous, *carbon dioxide, oxide of nitrogen

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*triple point, *equation of state, *gaseous, *parahydrogen, *hydrogen, orthohydrogen

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*equation of state, *helium, *neon, *argon, *nitrogen, *oxygen, *carbon monoxide, *hydrogen, *carbon dioxide, *methane, beattie-bridgeman equation, *gaseous, third virial coefficient,

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*methane, *ammonia, *entropy, *gaseous

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CA 23 7455 MF No. 12C-T A3 B1 C6 D1 E1 F6 G1 28
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*helium, *gaseous, *equation of state, second virial

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*argon, *solidified gas, *equation of state, mechanical property, *specific heat, calculation, elastic constant

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*hydrogen, *ortho para hydrogen, *parahydrogen, *thermal conductivity, *solidified gas, impurity effect, orthoparadeuterium

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*carbon dioxide, *solidified gas, lattice parameter, *thermal expansion, *crystal lattice property

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E. I. Du Pont De Nemours & Co., Wilmington, Del. JLR-69-13-No. 2, SN 19065, 1 tab
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*refrigerant, *density, *enthalpy, *entropy, *liquid, *gaseous, *physical property, *critical constant, freon 14, fluorinated hydrocarbon, table

08396 Vitesse des Ultrasons dans L'Azote Jusqua des Pressions Atteignant 1150 atmospheres. Velocity of ultrasounds in nitrogen at pressures up to 1150 atmospheres.
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*equation of state, *argon, *gaseous, *heat of vaporization,

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*parahydrogen, *hydrogen, *PVT data

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*helium, helium 4, *solidified gas, *thermal conductivity

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*equation of state, compressibility factor, *nitrogen, *internal energy, *butane, *ammonia, *water, *argon, carbon

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Schames,Leon
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MF No. 1C0-L A3 B3 C7 D1 E1 F7 G1 31
*equation of state, *helium, *hydrogen, *neon, *argon, *nitrogen, *air, *oxygen, *gaseous, virial coefficient, second virial coefficient, third virial coefficient, *viscosity

08646 Eksperimental'noye issledovaniye plotnosti zhidkogo kisloroda pri temperaturakh ot -190 do -120 degrees C i davleniyakh do 200 kG/CM2, vklyuchaya krivuyu nasyshtsheniya. Experimental investigation of the density of liquid oxygen at -190 to -120 degrees C and pressures to 200 KG/CM2, including the saturation curve.
Timrot,D.L. Borisoglebskiy,V.P.
Inzhener. Fiz. Zhur. Akad. Nauk Belorus. S.S.R. 4, 1, 3-13 (Jan 1961) 5 fig 1 tab 15 ref (English translation lable from OTS, No. 6121722)
MF No. 127-H A3 B1 C7 D1 E1 F3 G6
*liquid, *oxygen, *density, isochor, isotherm, isobar, high pressure, saturated liquid

08651 Uber die Verdampfungs Warme des Sauerstoffs. About the latent heat of vaporization of oxygen
Barshall,Hermann
Z. Elektrochem. 17, No. 9, 345-48 (1911) 1 fig 1 tab 6 ref
MF No. 13-U A3 B3 C7 D1 E1 F7 G1
*oxygen, *heat of vaporization, *liquid

08667 The compressibility isotherms of methane at pressures to 1000 atmospheres and at temperatures from -70 to 200 degrees
Kvalnes,H.M. Geddy,V.L.
J. Am. Chem. Soc. 53, 394-99 (Feb 1931) 1 fig 1 tab 7 ref
MF No. 12-H A3 B1 C8 D1 E1 F6 G1
*methane, *compressibility, *gaseous, *thermodynamic property, *PVT data, high pressure, isotherm

08669 The compressibility of and an equation of state for gaseous ethane
Beattie,J.A. Hadlock,C. Poffenberger,N.
J. Chem. Phys. 3, 93-96 (Feb 1935) 4 tab 8 ref
MF No. 12-L A3 B1 C2 D E F6 G1
*ethane, *compressibility, *equation of state

08673 Specific heat and dissociation of gases at high temperatures.
Wohl,K. Magat,M.
Z. physik. Chem. (Leipzig) B19, 117-38 (1932) 1 fig 13 tab
MF No. 16-M A3 B3 C2 D1 E F7 G1 32
*hydrogen, *nitrogen, *water, *argon, *oxygen, *gaseous chlorine, *specific heat, dissociation, high temperature

08676 Memoire sur la Compressibilite de L'air et de L'acide Carbonique de 1 atm 8 atm et de 20 degrees A 300 degrees C. Report on the compressibility of air and carbon dioxide from 1 to 8 atm and from 20 degrees to 300 degrees C
Amagat,E.H.
Ann. chim. et phys. 28, 464-80 (1883)
MF No. 12-Q A3 B2 C2 D1 E1 F7 G1
*air, *carbon dioxide, *compressibility, *PVT data, *gaseous,

08679 La Relacion de Densidades Normales de Co, y, O, Pesos Atomicos Del Carbono V Del Nitorgeno. The ratio of normal densities of CO and O2. Atomic weights of carbon and of nitrogen.
Moles,E. Salazar,M.T.
Anales Real Soc. Espan. Fis. Quim (Madrid) 32, 954-70 (Jun 1934) 1 fig 4 tab 26 ref
MF No. 15-R A3 B8 C2 D E F7 G1
*density, *carbon monoxide, *oxygen, atomic weight, *nitrogen,

08680 Heat capacity curves of the simpler gases. I. Heat capacity, entropy, and free energy of gaseous oxygen from near zero absolute to 5000 degrees K.
Johnston,H.L. Walker,M.K.
J. Am. Chem. Soc. 55, 172-86 (Jan 1933) 5 fig 9 tab 30 ref
MF No. 129-Z A3 B1 C4 D1 E3 F6 G1 33
*specific heat, *free energy, *oxygen, *entropy, spectroscopic data, *gaseous, calcultion, electronic specific heat;

08682 Theorem of corresponding states applied to saturated liquids and vapors
Hobson,M. Weber,J.A.
Am. Inst. Chem. Engrs. J. 2, No. 3, 354-59 (Sept 1936) 5 fig 4 tab 42 ref
MF No. 14-T A3 B1 C2 D1 E2 F6 G1
*compressibility factor, *gaseous, *gaseous mixtures, *nitrogen, *reduced variable, *carbon dioxide, *liquid mixture, *ethylene, *methane, *hydrocarbon, law of corresponding states, freon 13,

08683 Theorie des Gaz. -Une Forme del'equation d'etat. A form of the equation of state.
Duclaux,Jacques
Compt. rend. 244, 1427-29 (1957) 1 tab
MF No. 14-E A3 B2 C7 D1 E3 F7 G1
*nitrogen, *gaseous, *PVT data, compressibility factor, *equation of state, calculation

08684 Die Zustandsfunktion des realen Gases. Untersuchungen uber eine Erweiterung des Theorems der uebereinstimmenden Zeshinde Teil VI. Extension of the theorem of corresponding states. V. The equation of state of real gases.
Riedel,L.
Chem. Ing. Tech. 28, 557-62 (1956) 1 fig 4 tab 5 ref
MF No. 15-W A3 B3 C1 D1 E1 F7 G1
*PVT data, *argon, krypton, xenon, critical point, *critical constant, *rare gas, *equation of state, *reduced variable,

08685 The representation of gas properties in terms of molecular clusters.
Woolley,H.W.
J. Chem. Phys. 21, 236-41 (1953) 3 fig 2 tab 11 ref
MF No. 16-N A3 B1 C2 D1 E3 F6 G1 53
*argon, *nitrogen, *carbon monoxide, *carbon dioxide, xenon, *methane, *equation of state, third virial coefficient, lennard-jones function, *ethylene, *gaseous

08687 The density of oxygen and its compressibility below 1 atm.
Baxter,G.P. Starkweather,H.W.
Proc. Natl. Acad. Sci. U.S. 12, 699-703 (1926) 1 fig 1 tab 11 ref
MF No. 13-V A3 B1 C2 D1 E1 F6 G1
*oxygen, *density, *gaseous, pressure effect, atomic weight, *PVT data, compressibility factor, *physical property

08688 Isotherms of CO2 between 0 degrees and 100 degrees C
Nijhoff,G.P. Gerver,A.J.J. Michels,A.
Koninkl. Ned. Akad. Wetenschap. Proc. 33, 72-73 (1930) 1 tab 3 ref
MF No. 13-C A3 B1 C2 D1 E1 F7 G1
*carbon dioxide, *isotherms, *PVT data, high pressure

08692 Thermal conductivity of gas mixtures.
Ibbs,T.L. Hirst,A.S.
Proc. Roy. Soc. (London) A123, 134-42 (1929) 5 fig 2 tab 9 ref
MF No. 14W A3 B1 C8 D3 E1 F6 G1 29
*helium, *argon, *gaseous mixture, *binary system, *thermal conductivity;

08693 Thermal conductivities of oxygen and nitrogen.
Gregory,H. Marshal,S.
Proc. Roy. Soc. (London) A118, 594-607 (1928) 4 fig 11 tab 11 ref
MF No. 14-K A3 B1 C8 D1 E1 F6 G1
*thermal conductivity, *nitrogen, *oxygen, *gaseous, pressure

08695 Velocity of sound at different temperatures in hydrogen, nitrogen, air, oxygen, and carbon dioxide.
Hovi,V.
Ann. Acad. Sci. Fennicae Ser. A VI, No. 18, 1-18 (1959) 5 fig 1 tab 23 ref. Also in Progress in Refrigeration Science and Technology 1, 221-25(Proc. of Xth Intern. Congr. of Refrig., Copenhagen, 1959) Pergamon Press (1960) 4 fig 5 ref
MF No. 14-V A3 B9 C8 D1 E1 F7 G1 59
*velocity of sound, *hydrogen, *nitrogen, *air, *oxygen, *carbon dioxide, *gaseous, temperature effect

08696 Specific heats of air, oxygen, and nitrogen from 20 degees C to 370 degrees C.
Henry,P.S.H.
Proc. Roy. Soc. (London) A133, 492-506 (1931) 5 fig 3 tab 14 ref
MF No. 14-O A3 B1 C8 D1 E1 F6 G1
*specific heat, *air, *oxygen, *nitrogen, *gaseous

08698 Die Bestimmung der wahren spezifischen Warme einiger Gase bei hohen Temperaturen nach der LUMMER-PRINGSHEIMschen Methode. Determination of true specific heats of certain gases at high temperatures by the Lummer-Pringsheim method.
Eucken,A. Mucke,O.
Z. physik. Chem. (Leipzig) B18, 167-88 (1932)
MF No. 14-A A3 B3 C2 D1 E1 F7 G1
*argon, *helium, *oxygen, *hydrogen, *nitrogen, *carbon dioxide, *gaseous, *specific heat, pressure effect

08699 Dampfdrukkurven und tripelpunkte im temperaturgebeit von 14 degrees bis 90 degrees abs. Vapor-pressure curves and triple points in the temperature region from 14 degrees to 90 degrees absolute.
Henning,M.F. Otto,J.
Physik. Z. 37, No. 18, 633-8 (Sept 1936) 9 tabs 41 ref
MF No. 14-N A3 B3 C6 D1 E1 F7 G1 36
*vapor pressure, *triple point, *hydrogen, *neon, *oxygen, *nitrogen, *critical point, *liquid, *boiling point

08700 Viscosity and other physical properties of gases and gas mixtures.
Hirschfelder,J.O. Bird,R.B. Spotz,E.L.
Trans. Am. Soc. Mech. Engrs. 71, 921-37 (Nov 1949) 6 fig 21 tab 76 ref
MF No. 14-Q A3 B1 C1 D1 E2 F6 G1
*gaseous, *viscosity, *virial coefficient, *water, *ammonia, *thermal conductivity, *technical gas, *inert gas, oxide of

08701 Studies on the viscosity of gases at high pressure. Part V. Viscosities of oxygen and mixtures of oxygen and nitrogen.
Iwasaki,H. Takahasi,H.
Bull. Chem. Research Inst. Non-Aqueous Solutions. Tohoku Univ. 7, 77-86 (1956) 8 fig 17 tab 14 ref
MF No. 14-Y A3 B6 C6 D1 E [illegible] G1 58
viscosity, oxygen, gaseous mixture, nitrogen, linear system

08702 Note on the constancy of epsilon in the new equation of state.
Ishikawa,Tetsuya
Bull. Chem. Soc. Japan 28, 89-90 (1955) 1 fig 1 tab 3 ref
MF No. 14-X A3 B6 C0 D E F7 G1 55
*oxygen, *nitrogen, *water, *gaseous, *equation of state,

08703 Compressibilities of gases.
Pickering,S.F.
Natl. Bur. Standards Misc. Publ. No. 71 (Nov 1925) 13 fig
MF No. 15-U A3 B1 C8 D3 E2 F2 G6
*air, *argon, *helium, *hydrogen, *methane, *neon, *nitrogen, *oxygen, *gaseous, *PVT data, compressibility factor,

08704 Uber die Druckwage und die Isothermen von Luft, Argon und Helium zwischen 0 und 200 degrees. Concerning the pressure scale and the isotherms of air, argon, and helium between 0 and 200 degrees.
Holborn,L. Schultze,H.
Ann. Physik 47, 1089-1111 (1915) 4 fig, 8 tab, 13 ref
MF No. 12-S A3 B3 C8 D1 E1 F7 G1
*air, *argon, *helium, isotherm, *gaseous, *PVT data, pressure

08706 Specific heats of gases at high temperatures.
David,W.T. Leah,A.S.
Phil. Mag. 18, 307-21 (Aug 1934) 1 fig 5 tab 22 ref
MF No. 13-Z A3 B1 C2 D1 E2 F6 G1
*gaseous, *specific heat, *hydrogen, *nitrogen, *carbon monoxide, *carbon dioxide, *oxygen, *water, *gaseous mixture, *chemical

08707 Correction to the equation of state for nitrogen.
Smith, L.B. Taylor, R.S.
J. Am. Chem. Soc. 48, 3122-23 (Dec 1926) 1 tab 4 ref
MF No. 12-I A3 B1 C2 D1 E1 F6 G1
*nitrogen, *equation of state, *density, *isotherms, activity coefficient, melting point *gas

08710 Sorbe el Calculo De Temperaturas De Combustion Mediante Los Calores Especificos Medios De Gases Y Vapores. Calculation of combustion temperatures through use of mean specific - heat capacities of gases and vapor.
Tetzlaff,Werner
Ciencia Cult. (Maracaibo) 2 No. 5, 77-105 (1957)
9 fig 6 tab 5 ref
MF No. 16-D A3 B8 C8 D1 E2 F7 G1
*hydrogen, *nitrogen, *oxygen, *carbon monoxide, *air, *water, *carbon dioxide, *specific heat, heat of combustion, *methane, *ethane, *gaseous, calculation, *propane, *butane,

08711 Graphical residual. Its aplication to phase relations of oxygen and nitrogen.
Koch,H.A.,Jr. Williams,V.C.
Chem. Eng. Progr. 43, No. 11, 623-32 (1947) 15 fig 1 tab 15 ref
MF No. 15-F A3 B1 C7 D3 E2 F6 G1 47
*vapor pressure, *oxygen, *nitrogen, *gaseous mixture, *binary system, *phase equilibrium, *liquid, isotherm, *liquid

08715 Uber die Isothermen des Wasserstoffs. Concerning the isotherms of hydrogen.
Holborn,L.
Ann. Physik 63, 674-80 (1920) 5 tab 4 ref
MF No. 12-R A3 B3 C2 D1 E1 F7 G1
*hydrogen, isotherm, *PVT data

08716 Memoire sur la Compressibilite des gaz a des Pressions Elevees. Report on the compressibility of gases at elevated pressures
Amagat,E.H.
Ann. chim. et phys. 19, 345-85 (1880) 7 fig 7 tab 2 ref
MF No. 12-O A3 B2 C8 D1 E1 F7 G1
*compressibility, *gaseous, *oxygen, *air, *hydrogen, *carbon dioxide, *methane, *nitrogen, ethylene, high pressure

08717 Sur La Compressibilite Des Gaz Sous De Fortes Pressions. Concerning the compressibilities of gases under high pressures
Amagat,E.H.
Ann. chim. et phys. 22, 353-98 (1881) 6 fig 9 tab 2 ref
MF No. 12-P A3 B2 C8 D1 E1 F7 G1
*nitrogen, *hydrogen, *carbon dioxide, *methane, *ethane, *gaseous, *PVT data, *ethylene, atomic volume, coefficient of expansion, compressibility

08718 Sur la determination de la densite des gaz liquefies et de leurs vapeurs saturees. Elements du point critique de l'acide carbonique. Concerning the determination of the density of liquefied gases and of their saturated vapors. Elements of the critical point of carbon dioxide
Amagat,E.H.
Compt. rend. 114, 1093-98 (1893) 1 fig 1 tab
MF No. 12-Z A3 B2 C8 D1 E1 F7 G1
*carbon dioxide, *liquid, *critical constant, *gaseous, *PVT data, *vapor pressure, *density, saturated vapor

08719 Memoire sur la compressibilite de l'air, de l'hydrogene et de l'acide carbonique rarefies. Report on the low pressure compressibility of air, hydrogen, and carbon dioxide.
Amagat,E.H.
Ann. chim. et phys. 28, 480-99 (1883) 3 fig 2 ref
MF No. 12-Q A3 B2 C8 D1 E1 F7 G1 83
*air, *hydrogen, *carbon dioxide, *gaseous, low pressure, *PVT data, compressibility factor

08732 Der zweite Virialkoeffizient der verschiedenen Modifikationen des leichten und schweren Wasserstoffs. The second virial coefficients of the different variations between light and heavy hydrogen.
Schafer,Klaus
Z. physik Chem. (Leipzig) 36, 85-104 (1937) 4 fig 13 tab 8 ref
MF No. 18-M A3 B3 C8 D1 E1 F7 G1 37
virial coefficient, second virial coefficient, *hydrogen, *deuterium, *parahydrogen, *equation of state, *PVT data, *acetylene, *gaseous, *ortho-parahydrogen, normal hydrogen, ortho deuterium, *helium, *carbon dioxide

08734 Liquid viscosities above the normal boiling point for methane, ethane, propane, and n-butane
Swift,G.W. Lorenz,J. Kurata,F.
Am. Inst. Chem. Engrs. J. 6, No. 3, 415-19 (Sept 1960) 3 fig 4 tab 23 ref
A3 B1 C1 D1 E1 F6 G1
*liquid, *viscosity, *methane, *ethane, *propane, *butane,

08758 The influence of the density on the viscosity coefficient of gases.
Coremans,J.M.J. Beenakker,J.J.M.
Physica 26, No. 8, 653-63 (Aug 1960) 6 fig 4 tab 24 ref
A3 B1 C6 D1 E3 F6 G1
*density, *viscosity, *nitrogen, *argon, *methane, *carbon dioxide, *hydrogen, *helium, *deuterium, *gaseous, *reduced

08760 The second virial coefficient of binary mixtures of the hydrogen isotopes and helium at 20.4 degrees K.
Knaap,H.F.P. Knoester,M. Varekamp,F.H. Beenakker,J.J.M.
Physica 26, No. 8, 633-37 (Aug 1960) 1 fig 2 tab
A3 B1 C6 D1 E1 F6 G1 60
virial coefficient, *gaseous mixture, *binary system, *hydrogen, *helium, *deuterium, *hydrogen deuteride, second virial

08762 Virial coefficients of hydrogen and deuterium at temperatures between -175 degrees C and 150 degrees C. Conclusions from the second virial coefficient with regards to the intermolecular potential.
Michels,A. De Graaff,W. Ten Seldam,C.A.
Physica 26, No. 6, 393-408 (Jun 1960) 5 fig 7 tab
MF No. 19-Q A3 B1 C7 D1 E3 F6 G1
*hydrogen, *deuterium, *PVT data, *equation of state, second virial coefficient, third virial coefficient, intermolecular,

08763 The reduced equation of state, internal energy and entropy of argon and xenon.
Levelt,J.M.H.
Physica 26, No. 6, 361-77 (Jun 1960) 1 fig 12 tab
MF No. 21-L A3 B1 C1 D E3 F6 G1
*equation of state, *entropy, *argon, xenon, *rare gas,

08774 Measurement of volume contraction and heat of mixing of oxygen-nitrogen mixtures
Knobler,C.M. Knaap,H.F.P. Beenakker,J.J.M.
Physica 26, No. 2, 142 (Feb 1960) 1 fig
MF No. 19-W A3 B1 C1 D1 E1 F6 G1
*liquid mixture, *oxygen, *nitrogen, heat of mixing, *thermochemistry, *density

08776 The second virial coefficient of ortho and para-hydrogen at liquid hydrogen temperatures.
Beenakker,J.J.M. Varekamp,F.H. Knapp,H.F.P.
Physica 26, No. 1, 43-51 (Jan 1960) 3 figs 2 tab 12 ref
MF No. 19-X A3 B1 C6 D1 E1 F6 G1 60
*deuterium, *hydrogen, *orthohydrogen, orthodeuterium, *parahydrogen, *paradeuterium, normal hydrogen, *equation of state, second virial coefficient

08793 Low temperature equilibria in binary systems, including the solid phase.
Moran,D.W.
University of London, Ph.D Thesis (Sept 1959) 187 pp 23 fig
MF No. 7-A A3 B1 C8 D1 E1 F9 G7
*gaseous mixture, *liquid mixture, *binary system, *phase equilibrium, liquid-vapor equilibrium, dew point, bubble point, *methane, *ethane, *ethylene, isobar, isotherm, *density, solid-liquid equilibrium, *propane, *solidified gas, *melting curve, *liquid, *hydrocarbon, propylene, *nitrogen

08906 Vapor-liquid equilibrium studies on the system argon-oxygen
Wang,D.I.J.
ADVANCES IN CRYOGENIC ENG. 3, 294-304 (Proc. 1957 Cry. Eng. Conf.) Plenum Press, Inc., N.Y. (1960) Paper F-2
A3 B1 C7 D1 E1 F6 G2
*argon, *oxygen, *phase equilibrium, *binary system, *vapor pressure, *liquid mixture

08919 Thermodynamic properties of neon.
Yendall,E.F.
ADAVNES IN CRYOGENIC ENGINEERING 4, 47-64 (Proc. 1958 Cryogenic Eng. Conf.) Plenum Press, INC., New York (1960)
Paper A-4, 3 fig 2 tab 6 ref
A3 B1 C6 D1 E1 F6 G1 58
*neon, *equation of state, *refrigerant, joule-thomson effect, *enthalpy, *entropy, saturated vapor, table

09013 Effective density of boiling liquid oxygen.
Herzberg,F.
ADVANCES IN CRYOGENIC ENGINEERING 5, 526-32 (Proc. 1959 Cryogenic Eng. Conf.) Plenum Press, Inc., N.Y. (1960) Paper K-3, 4 fig 4 ref
A3 B1 C1 D1 E1 F6 G2
*oxygen, *liquid, *density, *boiling temperature

09008 A compilation and correlation of the P-V-T data of normal hydrogen from saturated liquid to 80 degrees K.
Stewart,R.B. Johnson,V.J.
ADVANCES IN CRYOGENIC ENGINEERING 5, 557-65 (Proc. 1959 Cryogenic Eng. Conf.) Plenum Press, Inc., New York (1960) Paper K-7, 3 fig 2 tab 7 ref
A3 B1 C6 D1 E2 F6 G2 59
*PVT data, *hydrogen, *liquid, *density, high pressure, compressibility factor, isochore, saturated liquid, normal

09014 Superheating and boiling liquid oxygen.
Lebedev,M.E.
Kislorod 12, No. 2, 15-21 (1959) 4 fig
MF No. 15-L A3 B7 C7 D3 E1 F7 G1 59
*oxygen, *liquid, *boiling point, superheated, superheating,

09025 Heat of vaporization of oxygen in the temperature range 80 degrees to 106 degrees K.
Alikhanov,R.A.
Zhur. Eksptl. i Teoret. Fiz. 29, 902-03 (1955) 1 fig
MF No. 14-H A3 B7 C1 D1 E1 F7 G1 55
*heat of vaporization, *oxygen, *liquid

09028 The properties of real gases.
Rowlinson,J.S.
HANDBUCH DER PHYSIK 12, 1-72; (S. Flugge, Editor) Springer Verlag, Berlin (1958) 40 fig 12 ref
MF No. 17-H A3 B1 C7 D1 E1 F7 G2 00
*argon, *PVT data, compressibility factor, *density, *gaseous, *rare gas, xenon, *equation of state, second virial

09034 The effect of a density maximum near the lambda point on the temperature distribution in liquid helium I.
Chase,C.E. Maxwell,E. Whitney,W.M.
Physica 26, No. 3, 160-62 (Mar 1960) 1 fig 7 ref
MF No. 19-V A3 B1 C5 D1 E1 F6 G1
*helium, *liquid, *density, *refractive index, lambda temperature, helium I, *dielectric constant

09038 Liquid viscosity above the normal boiling point.
Parisot,P.E. Johnson,E.F.
J. Chem. Eng. Data 6, No. 2, 265-67 (Apr 1961)
A3 B1 C7 D1 E1 F6 G1
*hydrocarbon, *methane, *ethane, *viscosity, *propane,

09076 WARMETABELLEN. Ergebnisse aus den thermischen Untersuchungen der Physikalisch-Technischen Reichsanstal. HEAT TABLES. Results of the thermal investigations of the physical-technical institute.
Holborn,K. Scheel,K. Henning,F.
Vieweg and Sohn, Braunschweig, Germany (1919) 70 pp 50 tab 32 ref
MF No. 18-C A3 B3 C7 D1 E2 F7 G2
*carbon dioxide, *oxygen, *boiling temperature, *specific heat, *liquid, *helium, *air, *argon, *gaseous, *PVT data, thermal expansion, *expansivity, temperature effect, *water, *colidified gas, *vapor pressure, *density, *heat of vaporization, saturated

09149 The viscosity of air and argon at temperatures between 0 and -183 degrees C and pressures from 0 to 150 atmospheres.
Filippova,G.P. Iskin,I.P.
Kislorod 12, No. 2, 38 (1959) 1 tab 5 ref
MF No. 19B-V A3 B7 C7 D1 E1 F7 G1 59
*viscosity, *air, *argon, *gaseous, temperature effect

09154 Dichte von Helium. Density of helium.
Brauer,H.
Kaltetechnik 12, 185-86 (Jun 1960) 1 ref
A3 B3 C1 D E F7 G1 60
*helium, *density, *gaseous, pressure effect, temperature effect,

09219 Condensed gas calorimetry. I. Heat capacities, latent heats and entropies of pure para-hydrogen from 12.7 to 20.3 degrees K. Description of the condensed gas calorimeter in use in the Cryogenic Laboratory of the Ohio State University.
Johnston,H. Clarke,J.B. Rifkin,E.B. Kerr,E.C.
J. Am. Chem. Soc. 72, 3933-38 (1950) 1 fig 9 ref
MF No. 57-T A3 B1 C6 D1 E1 F6 G1 50
*para hydrogen, *solidified gas, *liquid, *specific heat, *heat of vaporization, *heat of fusion, *triple point, *entropy;

09244 Uber die Temperaturabhangigkeit der Warmeleitfahigkeit fester Nichmetalle. On the temperature dependence of the thermal conductivity of solid non-metals.
Eucken,A.
Ann. Physik 34, 185-221 (1911) 19 tab 14 ref
A2 B3 C7 D1 E1 F7 G1 11
*thermal conductivity, temperature effect, *inorganic solid, fluoride, calcium, *quartz, chloride, potassium, aragonite, *glass, borosilicate glass, sodium, alum, sulfur;
A3 B3 C7 D1 E1
*thermal conductivity, temperature effect, *hydrogen, *air, *carbon dioxide, *gaseous

09249 ARGON, HELIUM AND THE RARE GASES. THE ELEMENTS OF THE HELIUM GROUP. VOL. I: HISTORY, OCCURRENCE, AND PROPERTIES
Cook,G.A.
Interscience Publishers, Inc., New York (1961) 394 pp
A3 B1 C5 D1 E2 F7 G2
*book, inert gas, *atomic molecular property, *chemical property, *thermal conductivity, *viscosity, *solidified gas, *PVT data, *liquid, *gaseous, *thermodynamic property, *velocity of sound,

09250 Contribution a l'etude de la Viscosite de l'air et des gaz. Contribution to the study of viscosity of air and other gases.
Fortier,A.
Publ. Sci. Tech. Min. Air. (France) No. 111, 1-75 (1937) 25 fig 16 tab
MF No. 72-Z A3 B2 C7 D1 E1 F7 G1
*air, *oxygen, *nitrogen, *hydrogen, *gaseous, *viscosity,

09269 Une Equation pour la Pression de la Vapeur saturee de l'Helium liquide. Equation for the saturated vapor pressure of liquid helium.
Clement,J.R. Logan,J.K. Gaffney,J.
Bull. IIR Annexe 1955-3, 56-59 (Conf. de Physique des Basses Temperatures, Paris, Sept 2-8, 1955) 2 fig 16 ref
A3 B2 C1 D3 E1 F8 G5
*helium, *liquid, *vapor pressure, *heat of vaporization,

09295 Theory and properties of solid argon.
Dobbs,E.R. Jones,G.O.
Repts. Progr. in Phys. 20, 516 (1957)
A3 B1 C6 D1 E2 F6 G1
*argon, *solidified gas, *thermal conductivity, *specific heat, *expansivity, zero point energy, *compressibility, *density, quantum effect, elastic constant, intermolecular force, debye constant, *melting curve, *PVT data

09399 The critical temperatures and pressures of binary systems - Hydrocarbons of all types and hydrogen.
Grieves,R.B. Thodos,G.
A.I.Ch.E. Journal 6, No. 4, 561-66 (Dec 1960) 9 fig 1 tab 23 ref
A3 B1 C1 D E1 F6 G1 60
*gaseous mixture, *critical constant, *hydrocarbon, *hydrogen

09409 Cryogenic data book (CGS units).
Chelton,D.B. Mann,D.B. (NBS-CEL, Boulder, Colorado)
Calif. Univ., Radiation Lab., Berkeley, Rept. No. UCRL-3421 (May 1956) Contr. No. W-7405-eng-48, 110 pp
A3 B1 C5 D1 E2 F8 G2 56
*liquid, *gaseous, *hydrogen, *nitrogen, *helium, *deuterium, *heat of vaporization, *density, *vapor pressure, *entropy, *enthalpy, T-S diagram;

09435 Experimental determination of the thermal conductivities of gases.
Gregory,H.
Proc. Roy. Soc. (London) A110, 91-122 (1926) 11 fig 12 tab 20 ref
MF No. 61-W A7 B1 C8 D1 E1 F6 G1 26
thermal conductivity, gas, hydrogen, air, experimental procedure;

09444 Analytical and preliminary design studies of nuclear rocket propulsion systems, Volume VI - Compilation of hydrogen properties.
Barney,J.D. Magee,P.M.
Aerojet-General Corp. Azusa, Calif., Final Rept. No. 1999 (Jun 1961) Contr. No. AF 04(611)-6028 Air Force Flight Test Center 51 pp.31 fig 94 ref
A3 B1 C6 D1 E2 F8 G5
*hydrogen, *liquid, *gaseous, *transport property, *phase transition property, *entropy, *dielectric constant, *specific heat, *solidified gas, *density, *velocity of sound *compressibility factor, *surface tension, *ortho-parahydrogen,

09481 Solubility of hydrogen and deuterium in liquid argon.
Volk,H. Halsey,G.D.Jr.
Washington Univ., Seattle, Rept. No. AFOSR TN 60-459 (Jul 1960) Contr. No. AF 49(638) (723) 26 pp 4 fig 4 tab 18 ref
ASTIA AD 242 756 A3 B1 C7 D1 E1 F5 G5 60
*hydrogen, *deuterium, *gaseous, argon, liquid, *solution, solubility, henry coefficient, second virial coefficient

09483 Specific heats and enthalpies of technical solids at low temperatures; a compilation from the literature.
Corruccini,R.J. Gniewek,J.J.
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A2 B1 C5 D1 E2 F4 G6 60

09484 Low temperature phenomena.
Lane,C.T.
Ann. Rev. Nucl. Sci. 1, 413-40 (1952) 14 fig 4 tab 40 ref
MF No. 17-C A3 B1 C4 D1 E1 F6 G1 52
*helium, *liquid, superfluid, helium 3, helium 4, helium 3-helium 4, lambda temperature, *thermal conductivity, *viscosity, second sound

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Lummer,O. Pringsheim,E.
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MF No. 15-N A3 B3 C2 D1 E1 F7 G1
*specific heat, *oxygen, *carbon dioxide, *hydrogen, *gaseous

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Josephy,E.
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MF No. 17-W A3 B3 C6 D2 E2 F7 G1 33
*parahydrogen, *triple point, *boiling temperature, review

09492 On the expansion of hydrogen.
Witkowski,A.W.
Bull Acad. Polon. Sci. 6, 305-38 (Jun 1905) 5 fig 6 tab
MF No. 13-J A3 B2 C7 D1 E1 F7 G1 05
*hydrogen, *expansivity, *gaseous, *PVT data, compressibility

09498 Thermodynamical properties of compressed methane
Levchenko,G.T.
Zhur. Fiz. Khim. 18, No. 10, 453-65 (1944) 8 fig 1 tab 15 ref
MF No. 13-F A3 B7 C8 D1 E1 F7 G1
*methane, *PVT data, *enthalpy, *entropy, *density, *gaseous,

09501 On molecular sound velocity of liquids. III.
Nomoto,O. Kishimoto,T.
J. Phys. Soc. (Japan) 9, No. 1, 73-77 (Jan-Feb 1954) 1 tab 23 ref
MF No. 112-F A3 B1 C1 D1 E2 F7 G1
*liquid, *velocity of sound, *helium, *hydrogen, *nitrogen, *argon, *oxygen, *methane, *organic liquids, *critical constants, molecular sound velocity, *specific heat ratio

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Farkas,L.
Ergeb. exakt. Naturw. 12, 163-218 (1933) 26 fig 26 tab 97 ref
MF No. 17-Y A3 B3 C1 D1 E1 F7 G1 33
*ortho-para hydrogen, *para hydrogen, *hydrogen, normal hydrogen, *gaseous, *specific heat;
A3 B3 C6 D1 E1
*hydrogen, normal hydrogen, *parahydrogen, *solidified gas, *liquid, *specific heat, *boiling temperature, *triple point

09507 The equation of state for pure nitrogen, gas phase.
Smith,L.B. Taylor,R.S.
J. Am. Chem. Soc. 45, 2107-24 (1923) 7 fig 8 tab
MF No. 12-J A3 B1 C2 D1 E1 F6 G1 23
*equation of state, *nitrogen, *gaseous, *PVT data, isochore

09533 Mesures preliminaires sur les deuxiemes coefficients du viriel de H2, HD et D2. Preliminary measurements of the second virial coefficients of hydrogen, hydrogen deuteride and deuterium.
Beenakker,J.J.M. Varekamp,F.H.
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MF No. 176-H A3 B2 C6 D3 E1 F7 G1
*equation of state, *gaseous, *hydrogen, *deuterium, *hydrogen, deuteride, second virial coefficient

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De Boer,J. (Univ. of Amsterdam)
Physica 24, Supl. 90-97 (1958)
A3 B1 C6 D3 E3 F6 G1 58
*helium, helium 4, helium 3, *hydrogen, *deuterium, *equation of state, second virial coefficient, *gaseous, intermolecular

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Jacyna,Vitold
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*helium, *equation of state, *joule-thomson coefficient, *energy, *specific heat, *gaseous, expansivity

09572 Compressibility of helium gas between 2.6 degrees and 4.2 degrees .K.
Keesom,W.H. Kraak,H.H.
Communs. Kamerlingh Onnes Lab., Univ. Leiden No. 214e (1935) 8 p 3 fig 2 tab 9 ref, repr. from Physica 2, 37 (1935)
A3 B1 C5 D E F7 G1 35
*helium, *gaseous, *PVT data, compressibility factor, isotherm, *equation of state, virial coefficient, second virial coefficient,

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Lawrence,D.J. Stewart,A.T. Guptill,E.W.
Can. J. Phys. 37, No. 9, 1069-72 (Sept 1959) 3 fig 4 ref
A3 B1 C7 D3 E1 F7 G1
*argon, *solidified gas, *vapor pressure, *thermal conductivity

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Robinson,D.W.
Bull. IIR Annexe 1955-3, 323-32 (Conf. de Physique des Basses Temperatures, Paris, Sept 2-8, 1955)
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*helium, *argon, *nitrogen, *gaseous, *viscosity, pressure

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*nitrogen, *enthalpy, *free energy, *entropy, fugacity, gibbs free energy, high pressure, *chemical potential, *gaseous

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*parahydrogen, *deuterium, *heat of vaporization, boiling temperature to critical temperature, orthodeuterium, *boiling

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Muckenfuss,C. Curtiss,G.F.
Wisconsin Univ. Naval Res. Lab., Madison, Rept. No. WIS-NSF-10 (Apr 1958) Grant No. NSF-G2746, 14 pp 2 tab 12 ref
DDC AD 163 066 A3 B1 C2 D1 E1 F5 G5 58
*thermal conductivity, *gaseous mixture, multicomponent system, *helium, *argon, *xenon, lennard jones function,

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Akad. Nauk S.S.S.R. Doklady 95, 1005-08 (1954), 1 fig 1 tab
MF No. 20-G A3 B7 C2 D1 E1 F7 G1 54
*equation of state, virial coefficient, *nitrogen, *ethane, *carbon dioxide, *methane, *ammonia, *water, *ethylene, *gaseous

09729 The thermodynamic properties of fluid helium.
Hill,R.W. Lounasmaa,O.V.
Phil. Trans. Roy. Soc. London 252, No. 1013, 357-95 (Mar 1960) 14 fig 13 tab 39 ref
MF No. 21-N A3 B1 C5 D1 E1 F7 G1
*helium, *gaseous, *specific heat, *PVT data, isochore, *entropy, *internal energy, *free energy, *enthalpy,

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Lounasmaa,O.V.
Cryogenics 1, No. 4, 212-21 (Jun 1961) 11 fig 6 tab 13 ref
MF No. 21-M A3 B1 C5 D1 E1 F7 G1
*helium, *liquid, *specific heat, *entropy, *internal energy,

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MF No. 13-Q A3 B1 C5 D1 E1 F7 G1 59
*helium, *equation of state, virial coefficient, benedict-webb-rubin equation, helium 4, isochore, *PVT data,

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Bukacek,R.F.
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*nitrogen, *equation of state, virial coefficient, *liquid, *gaseous, saturated vapor, *PVT data, second virial coefficient,

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MF No. 14-G A3 B1 C2 D1 E1 F6 G1
*carbon dioxide, *isotherm, *gaseous, *density, *PVT data,

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*nitrogen, isotherm, *gaseous, *PVT data, compressibility factor, *equation of state, virial coefficient, second virial

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MF No. 19-B A3 B7 C8 D1 E1 F7 G1
*density, *air, *argon, *oxygen, *gaseous, *PVT data,

09752 Two modifications of hydrogen.
Khariton,Yu
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MF No. 18-G A3 B7 C7 D1 E1 F7 G1 30
*hydrogen, *ortho parahydrogen, parahydrogen, *gaseous, *specific heat

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ASTIA AD 244 404 A3 B1 C5 D1 E5 F5 G5
*helium, *liquid, saturated liquid, *specific heat, *entropy, *velocity of sound, helium II, lambda temperature, *density

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Hou,Y.C. Martin,J.J.
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*fluorinated refrigerant, *vapor pressure, *density, *critical constants, *PVT data, *specific heat, *compressibility factor, *equation of state, freon 23, saturated liquid

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*hydrogen, *fluoride, *water, *inorganic fluid, hydrogen cyanide, *ammonia, boron hydride, *organic fluid, acetone, *hydrocarbon, paraffin class, *gaseous, *entropy, calculation;

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*carbon, *graphite, heat of formation, *entropy, *free energy, diamond, *thermochemistry, compilation, *carbon dioxide

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MF No. 16-L A3 B1 C1 D1 E1 F6 G1
*hydrogen, *liquid hydrogen, *velocity of sound, *para hydrogen, manometer, interferometer, *compressibility, density

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Van Itterbeek,A. Verbeke,O.
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MF No. 149-R A3 B1 C7 D1 E1 F6 G1
*nitrogen, *argon, *liquid, *expansivity, *density, *specific heat, *velocity of sound, pressure effect, temperature effect

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Hestermans,P. White,D.
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*vapor pressure, *heat of vaporization, *specific heat, *methane, *boiling temperature, *critical constants, *liquid,

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MF No. 23-N A3 B1 C1 D3 E1 F7 G1
*hydrogen, *solidified gas, *thermal conductivity, orthohydrogen

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Vignos,J.H. Fairbanks,H.A.
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MF No. 145-N A3 B1 C1 D E1 F6 G1
*helium, *solidified gas, *phase transition property, helium 4, *melting curve, *entropy, triple point, *velocity of sound,

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Zeleny,J. Smith,R.H.
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A3 B1 C8 D1 E1 F6 G1
*liquid, *solid, *vapor pressure, *carbon dioxide, carbonic

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Ind. Eng. Chem. 27, No. 5, 577-81 (1935)
A3 B1 C2 D1 E1 F6 G1
*activity coefficient, *gas, *hydrogen, *nitrogen, *ammonia, *air, *helium, *mixture, *steam, *propane, joule-thomson effect, pentane,

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*nitrogen, *oxygen, *liquid, *vapor pressure, *solidified gas, transition temperature, *triple point

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*carbon dioxide, *liquid, *solidified gas, *vapor pressure, *thermodynamic function, specific heat, free energy

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Natl. Aeronaut. Space Admin. Tech. Note No. D-275 (Apr 1960) 71 pp
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*hydrogen, *thermodynamic property, *transport property,

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Buchmann,Ernst
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A3 B3 C5 D1 E1 F7 G1
*helium, *compressibility, isotherm, binary system, liquid, solidified gas, high pressure

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Kirkwood,J.G. Keyes,F.G.
Phys. Rev. 37, 832-40 (1931) 2 fig 3 tab 15 ref
MF No. 132-F A3 B1 C6 D1 E3 F6 G1 31
*helium, *equation of state, second virial coefficient, *gaseous, calculation, quantum effect, *PVT data

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A3 B1 C2 D1 E1 F9 G7
*thermodynamics, *fluid flow, *critical region, *heat transfer, *heat transfer coefficient, *carbon dioxide, *T-S diagram, pressure, *enthalpy, flowchart, *thermal conductivity, *entropy, *density, *specific heat, *viscosity, *gaseous

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Roebuck,J.R. Osterberg,H.
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A3 B1 C8 D1 E1 F6 G1 32
*helium, *gaseous, *enthalpy, pressure effect, temperature effect, *joule-thomson coefficient;

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A3 B1 C3 D1 E2 F6 G1
*helium, *gaseous, *specific heat, *expansivity, thermal expansion, *density, temperature effect, pressure effect

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Brodyanskii,V.M. Kupershmidt,A.E.
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*heat exchange, heat transfer, computation, oxygen, air;
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*enthalpy, *oxygen, *air, temperature effect

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Eyring,Henry
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A3 B1 C7 D1 E2 G6 G1 60
*critical constants, *rare gas, *neon, *argon, krypton, xenon;
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*theory, *molecular property, *fluid, *physical property, *thermodynamic property, viscosity, surface tension, diffusion coefficient, reaction rate, accommodation coefficient, partition

10387 Compression and densities of four solidified hydrocarbons and carbon tetrafluoride at 77 degrees K.
Stewart,J.W. La Rock,R.
J. Chem. Phys. 28, 425-27 (Mar 1958) 1 fig 2 tab 6 ref
ASTIA AD 253 139 A3 B1 C7 D1 E1 F6 G1
*density, *ethane, *ethylene, *propane, propylene, carbon tetrafluoride, *compressibility, solid, high pressure,

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Stewart,J.W.
J. Chem. Phys. 33, 128-33 (Jul 1960) 2 fig 1 tab 23 ref
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*phase transition property, *ammonia, silicon tetrafluoride, hydrogen sulfide, carbon tetrafluoride, volume, *PVT data,

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*phase transition property, *solidified gas, *methane, deutero methane, *oxygen, compression, high pressure, density,

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Baxter,G.P.
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MF No. 129-X A2 B1 C2 D3 E1 F6 G1
*density, atomic weight, boron, *carbon, *antimony, dysprosium, *atomic property, scandium, *potassium, yttrium, *silver, *acetylene, *oxygen, *nitrogen, *neon, chlorine, *argon, *gaseous

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MF No. 130-H A3 B1 C8 D1 E1 F6 G1 24
*oxygen, *density, *gaseous

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Clusius,K. Konnertz,F.
Z. Naturforsch. 4a, No. 2, 117-24 (Jul 1949) 6 fig 6 tab
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*oxygen, *liquid, *heat of vaporization, *ethylene, propylene, apparatus

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Dewar,J.
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MF No. 129-Y A6 B1 C1 D1 E1 F6 G1 11
*solidified gas, oxygen, LOX, *vapor pressure, charcoal, *technique;
A3 d1 C7 D1 E1
*oxygen, melting temperature

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Markowski,H.
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Kharbanda,Om.P.
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MF No. 138-U A3 B1 C2 D3 E2 F6 G1
*thermal conductivity, *gaseous, *hydrocarbon, *air, *oxygen, *ammonia, *argon, chlorine, *helium, *neon, *propane,

10539 Viscosity difference measurements for normal and para liquid hydrogen mixtures
Webeler,R. Bedard,F.
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*hydrogen, *parahydrogen, *liquid, *liquid mixture, *viscosity

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A3 B1 C7 D E1 F9 G7
*nylon, *stress-strain curve, *molecular property, extensometer, *rheology, *neon, *argon, *nitrogen, *surface tension, *liquid.

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Zaitseva,L.S.
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temperature effect, monatomic, *thermal conductivity, *helium, *neon, *argon, krypton, xenon, mercury, *rare gas, *gaseous

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Fano,L. Beckett,C.W.
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*argon, *density, *viscosity, *gaseous, *liquid

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A3 B1 C1 D1 E1 F6 G1
*viscosity, measurment, helium II, *liquid, *helium, density, time effect, *viscometry, *liquid helium

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A3 B1 C1 D1 E1 F6 G1
*viscosity, *liquid, *hydrogen

10623 The viscosity of hydrogen vapour.
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Physica 5, No. 8, 749-52 (Aug 1938) 1 fig 2 tab
A3 B1 C6 D1 E1 F6 G1 38
*hydrogen, *viscosity, *gaseous, saturated vapor

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*viscosity, *hydrogen, *gaseous, saturated vapor

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*viscosity, *liquid, *helium, theory, temperature dependence,

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Holley,C.E.Jr. Worlton,W.J. Zeigler,R.K.
Calif. Univ. Los Alamos Scientific Lab., N.M. Rept. LA-2271 (MAR 1($() Contr. W-7405-ENG.36, 51 pp 22 tab 10 ref
MF No. 132-M A3 B1 C6 D1 E2 F3 G5
*hydrogen, *nitrogen, *oxygen, *carbon dioxide, *ammonia, *methane, *helium, *compressibility factor, fugacity, pressure effect, temperature effect, beattie-bridgeman

10658 The calculation of transport properties at elevated temperatures.
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*viscosity, *nitrogen, *oxygen, nitric oxide, *transport property, self diffusion, high temperature, *thermal conductivity, diffusion coefficient, *gaseous, *air

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Ind. Eng. Chem. 49, 2026-33 (1957) 12 fig 4 tab 21 ref
MF No. 135-A A3 B1 C2 D1 E1 F6 G1
*viscosity, *methane, *nitrogen, *helium, viscometer,

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*oxygen, *viscosity, equation, very high pressure, high pressure, *gaseous

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Wisconsin Univ. Eng. Expt. Sta. Rept. No. 4, 99 pp (Oct 1955) 33 fig 32 tab 15 ref
MF No. 132-O A3 B1 C1 D1 E1 F8 G5
*hydrocarbon, *fluid, *joule-thomson coefficient, organic compound, *hydrogen, *helium, *neon, *nitrogen, *oxygen, *carbon monoxide, *thermodynamic property, *PVT data, T-S diagram

10682 Measurements on thermal diffusion with the use of ultrasonics.
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A3 B1 C7 D1 E1 F6 G1 53
*hydrogen, *nitrogen, *gaseous mixture, *binary system, thermal diffusion, *velocity of sound, concentration effect

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Newman,B.O.
General Electric Co., Schenectady, N.Y. GL Rept. No. 401 (Nov 1947) 37 p 44 ref
ASTIA AD 649 51 A3 B1 C2 D1 E2 F5 G6
*helium, *air, *water, viscosity, *thermal conductivity, *specific heat, annotated bibliography, *thermal expansion,

10703 Viscosity and superfluidity in liquid helium.
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*viscosity, *liquid, *density, theory, high pressure, alcohol, *methane, carbon tetrachloride, paraffin class,

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A3 B1 C1 D2 E2 F8 G5
*viscosity, *thermal conductivity, diffusion, *technical gas, *inert gas, oxide of nitrogen, *fluorinated refrigerant, *methane, *ethane, *deuterium, *hydrocarbon, *liquid, mixture,

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Veinik,A.I.
Dokl. Akad. Nauk Belorussk S.S.R. 1, No. 1, 7-11 (1957) 1 fig 1 ref
MF No. 132-K A3 B7 C2 D3 E1 F7 G1 57
*equation of state, *carbon dioxide, *water, *gaseous, *PVT

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*helium, *thermal conductivity, *gaseous, equation, theory

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Contr. No. N7ONR-28511, 15 pp 5 tab 8 ref
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*thermodynamic properties, real gas, high pressure, *equation of state, virial coefficient, enthalpy, binary system, theory, aplication, *technical gas, polar, temperature effect, *inert

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*viscosity, air, *carbon dioxide, *vapor pressure, *gas, critical constants, *helium, *hydrocarbon, *methane, *water, *propane, law of corresponding states, *reduced variable

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Tsien,H.S.
J. Am. Rocket Soc. 23, 17-24, 35 (Feb 1953) 3 fig 6 tab 16 ref
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*specific heat, coeffient of expansion, *compressibility, *argon, *carbon monoxide, *methane, *nitrogen, *oxygen, *hydrocarbon, *velocity of sound, *thermal conductivity, liquid, *transport

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*viscosity, temperature dependence, *gas, *argon, *carbon dioxide, *helium, *hydrogen, *nitrogen, *oxygen, *hydrocarbon, *methane, *critical constant

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Lohrisch,F.W.
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*heat transfer, coefficient, equation, gas, *oxygen, *nitrogen, *air, *carbon monoxide, *hyirogen, *carbon dioxide, *methane, *ethane, *water, *density, *viscosity, *thermal conductivity, *specific heat, *transport property

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MF No. 137-M A3 B1 C8 D1 E1 F7 G1
*viscosity, intermolecular force, *gaseous mixture, *binary system, *hydrogen, *oxygen, *argon, *carbon monoxide, *nitrogen, *rare gas, krypton, xenon, *neon

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A3 B1 C2 D1 E2 F3 G6
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Koeppe,W.
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*hydrogen, *joule-thomson coefficient, *enthalpy, critical temperature, pressure effect, inversion curve,

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Peshkov,V.P.
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second sound, super fluid, helium II, *velocity of sound, *liquid, *helium, temperature effect

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MF No. 135-S A3 B1 C1 D1 E1 F6 G1
*thermal conductivity, *gas, diatomic, inert gas, *halogen, liquid, density, *reduced variable, nitrogen, chlorine, oxygen,

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Ziebland,H. Burton,J.T.A.
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*nitrogen, *argon, *liquid, *gaseous, *thermal conductivity,

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A8 B1 C2 D5 E1 F3 G5
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Dilley,J.R.
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MF No. 132-Y A3 B1 C2 D3 E F6 G1 31
high pressure *density, *gaseous, temperature, mixture, *hydrogen, *nitrogen, *carbon monoxide, volume, *PVT data

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*carbon monoxide, melting point, *nitrogen, *melting curve, *heat of fusion, *phase transition property

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third virial coefficient, lennard-jones function, *argon, *methane, *nitrogen, calculation, *carbon dioxide, ethylene, *hydrogen, *ethane, *helium, *deuterium, *virial coefficient, *joule-thomson coefficient

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Voronel,A.V.
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MF No. 138-P A3 B7 C2 D1 E1 F7 G1
law of corresponding states, *heat of vaporization, carbon tetrachloride, *oxygen, *nitrogen, *carbon monoxide, *neon, *argon, krypton, xenon

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*phase diagram, *solidified gas, *neon, *nitrogen, *oxygen, temperature dependence, pressure effect, hydrogen, *melting curve

10913 Uber das Warmeleitvermogen, die spezifische Warme und die innere Reibung der Gase. Concerning the thermal conductivity, specific heat and viscosity of gases
Eucken,A.
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MF No. 135-J A3 B3 C7 D1 E1 F6 G1
*viscosity, *specific heat, *gas, *thermal conductivity, *technical gas, oxide of nitrogen, hydrocarbon, ammonia, *argon, *helium, *methane, ethane

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*equation of state, *density, *helium, *neon, *argon, *hydrogen, *nitrogen, *oxygen, *air, *carbon dioxide, *methane,

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*thermal conductivity, *hydrogen, *oxygen, *gaseous mixture, *binary system

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*thermal conductivity, *refrigerant, *fluorinated refrigerant, freon

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MF No. 139-U A3 B7 C7 D1 E1 F7 G1
*liquid oxygen, *density, saturated liquid, *PVT data,

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MF No. 140-K A3 B1 C7 D1 E1 F6 G1
*velocity of sound, *nitrogen, *liquid, *argon, high pressure, *density, specific heat ratio, *measurement, interferometer,

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MF No. 140-W A3 B1 C2 D1 E1 F6 G1
*multicomponent system, *specific heat, *thermal conductivity, *viscosity, diffusion coefficient, *carbon monoxide, *carbon dioxide, *nitrogen, *water, hydrogen chloride, *binary system,

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*equation of state, *carbon dioxide, *hydrocarbon, *PVT data,

11033 Thermal conductivity and prandtl number of carbon dioxide and carbon dioxide air mixtures at one atmosphere
Novotny,J.L. Irvine,T.F.Jr.
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*carbon dioxide, *air, *binary system, *prandtl number, *viscosity, *thermal conductivity, *diffusion, *thermal diffusion, diffusion coefficient

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*gaseous mixture, *hydrogen, *deuterium, *isotopes, *argon, *neon, *helium, *viscosity;
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*molecular property, *quantum statistics, viscosity, *transport property, lennard-jones function, intermolecular force,

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saturn, liquid hydrogen, *storage, space application, surface, propellant, *hydrogen, *liquid, *density, thermal diffusivity, *thermal conductivity, *vapor pressure, *specific heat, *heat of vaporization, *insulation, linde SI

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*helium, isotherm, *PVT data, virial coefficient

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*compressibility, *solidified gas, *helium, *hydrogen, *deuterium, *neon, *nitrogen, *argon, *density, high pressure

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*hydrogen, *equation of state, isotherm, virial coefficient, *PVT data, *thermodynamic property

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*hydrogen, *helium, *equation of state, *virial coefficients, vanderwaals, second virial coefficient, *gaseous, *PVT data

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*helium, *vapor pressure, *density, *liquid, *electrical

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*binary mixture, *hydrogen, *deuterium, *hydrogen deuteride, *vapor pressure, *boiling temperature, dew point, PTX data, activity coefficient, temperature effect, pressure effect,

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*heat of vaporization, *liquid, *helium, *hydrogen, *neon, *nitrogen

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*mixture, gaseous mixture, *binary system, *ternary system, *nitrogen, *hydrogen, *ammonia, *thermal conductivity

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*helium, *liquid, lambda temperature, theory, *velocity of sound, sound absorption, *physical property

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Rice,O.K.
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*hydrogen, *helium, *neon, *joule-thomson coefficient, inversion curve, *reduced variable, law of corresponding states, letter,

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*heat transfer, cryogenic fluid, space application, radiation, *thermal radiation;
A3 B1 C7 D1 E2
propellant, *gaseous mixture, fluorine, *hydrogen, *oxygen,

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*inert gas, *critical constants, krypton, xenon, *triple point, *liquid, *gaseous, zero point energy, *vapor pressure, *atomic-molecular property, intermolecular force, lennard-jones function, *neon, *argon

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*gaseous mixture, *liquid mixture, *liquid, *binary system, *phase equilibrium, *ammonia, *argon, *critical region, vapor-liquid equilibrium, temperature effect, pressure effect, concentration effect, isotherm, *vapor pressure

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Hersh,C.K.
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*oxygen, *ozone, *liquid mixture, *liquid, *phase transition property, *critical constant, *thermal conductivity, *heat of vaporization, *binary system, surface tension, *viscosity.

11613 The compressibility of hydrogen-nitrogen-methane mixtures at high pressures
Bolshakov,P. Eterman,A.
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*compressibility, *ternary system, *hydrogen, *nitrogen, *methane, high pressure, *gaseous mixture

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A3 B1 C7 D1 E1 F7 G1
*oxygen, *nitrogen, *density, pressure effect, isotherm,

11625 The densities of saturated liquid hydrogen.
Goodwin,R.D. Diller,D.E. Roder,H.M. Weber,L.A.
Cryogenics 2, No. 2, 81-83 (Dec 1961) 3 fig 5 tab 15 ref
A3 B1 C6 D1 E1 F6 G1
*hydrogen, *liquid, liquid hydrogen, *density, *parahydrogen,

11653 Quantum effects in the liquid state by means of a phenomenological cell model. The vapour pressure ratio of Ne and Ar isotopes
Fieschi,R. Terzi,N.
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A3 B1 C6 D1 E3 F6 G1
*neon, *argon, *vapor pressure, vapor pressure ratio, *isotopes,

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*thermal conductivity, *hydrogen, *nitrogen, *air, *methane, *carbon dioxide, *gaseous, isotherm

11679 Krypton-krypton molecular interaction.
Barua,A.K. Chakrabarti,P.K.
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A3 B1 C6 D3 E2 F7 G1
*thermodynamic property, calculation, *compressibility factor, inversion curve, review, *fluid

11696 Transport properties of gaseous helium at low temperatures.
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A3 B1 C5 D1 E2 F7 G2 S7
*helium, *gaseous, boltzmann equation, review, *transport property, diffusion coefficient, interaction coefficient, intermolecular force, *viscosity, *thermal conductivity, helium 3,

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A3 B1 C6 D1 E1 F7 G1
*hydrogen, *liquid, normal hydrogen, *density, *velocity of sound, pressure effect

11710 The velocity of sound in liquid argon and liquid nitrogen at high pressures.
Van Itterbeek,A. Van Dael,W.
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A3 B1 C7 D1 E1 F7 G1 61
*nitrogen, *argon, *liquid, liquid nitrogen, liquid argon, *velocity of sound, high pressure, pressure effect

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Lounasmaa,O.V.
Cryogenics 1, 212-21 (Jun 1961) 11 fig 6 tab 14 ref
A3 B1 C5 D1 E1 F6 G1
*helium, helium 4, liquid helium, *thermodynamic property, PVT data, pressure coefficient, *specific heat, *entropy,

11717 Compressibility factor of fuel gases at 60 degrees F and 1 atm.
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J. Chem. Eng. Data 6, No. 4, 499-504 (Oct 1961) 3 fig 5 tab 17 ref
A3 B1 C2 D1 E1 F6 G1
*hydrocarbon, *compressibility factor, *gaseous, butane, pentane, ethylene, propene, *binary system, *methane, *ethane, *gaseous

11745 Isothermal flow of liquid helium II in wide capillaries.
Bhagat,S.M. Mendelssohn,K.
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A3 B1 C5 D1 E1 F6 G1
*helium, helium II, *viscosity, superfluidity, *liquid, *fluid

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A3 B1 C7 D1 E1 F6 G1
*liquid, *enthalpy, *ethane, *methane, *mixture,

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Tans,A.M.P.
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MF No 142-K A3 B1 C2 D3 E2 F6 G1
*methane, *gaseous, high pressure, *viscosity, nomogram

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Mason,I. Dolley,L.G.F.
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A3 B1 C2 D1 E1 F6 G1
*gaseous mixture, *argon, *oxygen, *ethylene, *binary mixture, pressure effect, concentration effect, *density

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A3 B1 C4 D E3 F6 G1
*helium, *solidified gas, *magnetic property, *specific heat, *thermal expansion, *melting curve, coefficient of expansion, pressure effect, theory

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Rogers,J.D. Zeigler,R.K. McWilliams,P.
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A3 B1 C6 D2 E3 F8 G5
*hydrogen, *gaseous, *thermal conductivity, *para hydrogen, *viscosity, *liquid, *mathematical analysis,

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Lisman,J.H.C. Keesom,W.H.
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MF No. 148-N A3 B1 C7 D1 E1 F6 G1
*oxygen, *solidified gas, *melting curve, pressure effect, *triple point, *density, crystal structure

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Giauque,W.F. Egan,C.J.
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MF No. 147-U A3 B1 C6 D1 E1 F6 G1
*carbon dioxide, *solidified gas, *specific heat, *vapor pressure, *heat of sublimation, *entropy, temperature

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Edwards,M.H. Woodbury,W.C.
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*helium, helium 4, *liquid, *density, *compressibility, specific heat ratio, *refractive index, saturated liquid,

11803 Vapour pressure of liquid nitrogen
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*thermal conductivity, pressure effect, *nitrogen, *methane, *argon, *ethane

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Brinkman,H.C.
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*hydrogen, *deuterium, *liquid, *viscosity, temperature

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MF No. 148-I A3 B1 C8 D1 E1 F6 G1
*carbon dioxide, *gaseous, *specific heat, temperature effect

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MF No. 148-M A3 B1 C7 D1 E1 F6 G1
*rare gas, krypton, *liquid, saturated liquid, *vapor pressure, triple point-to-critical point, temperature effect

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*ethane, *PVT data, *density, *enthalpy, *entropy, *gaseous, *liquid, fugacity, pressure effect, temperature effect.

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MF No. 148-V A3 B1 C8 D1 E2 F6 G1
*carbon dioxide, *density, *PVT data, compressibility factor, *enthalpy, *entropy, t-s diagram, superheated, *gaseous,

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Sherrat,G.G. Griffiths,E.
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MF No. 148-R A3 B1 C2 D1 E1 F6 G1
*air, *carbon dioxide, *refrigerant, freon, freon 12, *thermal conductivity, temperature effect

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Onnes,H.K. Weber,S.
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*helium, *gaseous, *viscosity, pressure effect, temperature

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Kestin,J. Leidenfrost,W.
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MF No 147-E A3 B1 C2 D1 E1 F6 G1
*air, *argon, *carbon dioxide, *deuterium, *hydrogen, *helium, krypton, *neon, *nitrogen, *oxygen, *water, *gaseous, *viscosity, xenon

11843 Density and expansivity of solid xenon
Eatwell,A.J. Smith,B.L.
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MF No 146-Z A3 B1 C6 D1 E1 F6 G1
*rare gas, xenon, *solidified gas, *density, *expansivity, *argon, *krypton

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MF No 145-R A3 B1 C5 D1 E2 F6 G1
*helium, *neon, *argon, *gaseous, *rare gas, krypton, xenon, *liquid, law of corresponding states, *thermal conductivity,

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MF No 145-Z A3 B1 C4 D3 E1 F6 G1
*helium, helium 3, *liquid, *dielectric constant, *density, *expansivity, thermal expansion, *entropy, pressure effect, *melting curve, high pressure

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*hydrogen, *denterium, *hydrogen deuteride, *viscosity, *para hydrogen, *orthoparahydrogen, diffusion coefficient, *gaseous, *gaseous mixture, virial coefficient, *equation of state, thermal diffusion

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MF No. 145-W A3 B1 C9 D1 E1 F6 G1
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A3 B1 C6 D1 E1 F9 G7
*hydrogen, *orthoparahydrogen, *viscosity, concentration effect, *triple point, *density, *liquid, normal hydrogen,

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MF No. 144-M A3 B1 C7 D1 E1 F6 G1
*argon, *nitrogen, *liquid, *surface tension, temperature

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MF No. 144-K A3 B3 C2 D1 E2 F7 G1
*helium, *neon, *argon, *rare gas, krypton, xenon, *equation of state, *PVT data, virial coefficient

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Frenkel,Y.I. Gubanov,A.
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MF No. 85-H A3 B7 C7 D1 E3 F7 G1
*argon, *nitrogen, *oxygen, *liquid, alcohol, bromine, *water, benzene, *surface tension

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MF No. 146-B A3 B1 C5 D1 E1 F7 G1
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*helium, helium 3, *liquid, *thermal conductivity, temperature

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Plank,R.
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*oxygen, *air, *nitrogen, *gaseous, *liquid, *viscosity, *thermal conductivity, *density, *transport property, prandtl

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ASTIA AD 269 584 A6 B1 C6 D3 E3 F5 G5 61
*pressurization, propellant, liquid, space application, *hydrogen, *oxygen, calculation;

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*helium, *thermal conductivity, *gaseous, temperature effect,

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*helium, helium 4, *liquid, *melting curve, volume change, *expansivity, thermal expansion, *compressibility,

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Chase,C.E. Maxwell,E. Millett,W.E.
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MF No. 190-M A3 B1 C5 D1 E1 F6 G1
*helium, *liquid, *dielectric constant, polarization, *electrical property, *density, temperature effect, *expansivity, coefficient of expansion, *specific heat, saturated liquid, *compressibility

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*gaseous, *liquid, *viscosity, calculation, *argon, *nitrogen, *oxygen, *carbon dioxide, *methane, *ethane, *propane, *butane,

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No. 326b A3 B1 C7 D1 E1 F6 G1 61
*liquid mixture, *oxygen, *nitrogen, *phase equilibrium, *entropy, *enthalpy, heat of mixing, *binary system;

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Dugdale,J.S.
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*electrical conductivity, resistivity, pressure effect, *potassium, *sodium, *lithium, pressure coefficient, *rubidium, *cesium, *coper, *gold, *silver, size effect, temperature effect, *helium, *solidified gas, *melting curve

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Liquid propellant information agency
Aplied Physics Lab., John Hopkins, Univ., Silver Springs, Md. (Mar 1961) 248 pp
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*oxygen, *argon, *liquid mixture, *binary system, *density;
A3 B1 C7 D1 E1
*oxygen, *nitrogen, *liquid mixture, *binary system, *density;
A3 B1 C6 D1 E1
*hydrogen, *deuterium, normal hydrogen, *liquid mixture, *binary system, *density, *liquid;

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Calif. Univ., Lawrence Radiation Lab., Berkeley, UCRL-9388 (Feb 1961) Thesis, 162 pp 54 fig 23 tab 79 ref
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*hydrogen, *solidified gas, high pressure, pressure effect, *orthohydrogen, *specific heat, entropy, enthalpy, *deuterium, *parahydrogen, *orthoparahydrogen, *paradeuterium,

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*rare gas, krypton, xenon, *argon, *solidified gas, *melting curve, pressure effect, *reduced variable, high pressure, *triple point, law of corresponding states

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*oxygen, *gaseous, *equation of state, pressure effect,

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*argon, *gaseous, *velocity of sound, pressure effect,

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A2 B3 C7 D1 E1 F7 G1
*oxygen, *isotope, *liquid, temperature effect, *heat of vaporization, *vapor pressure

12264 Ergebnisse der Tieftemperaturforschung XXX. Die Dampfdruckdifferenz von 12CH4 und 13CH4 zwischen Schmelz-und Siedepunkt. The vapor pressure differences of 12CH4 and 13CH4 between melting and boiling points
Clusius,K. Endtinger,F. Schleich,K.
Helv. Chim. Acta 43, No. 159, 1267-73 (1960) 1 fig 2 tab 13 ref
A3 B3 C6 D1 E1 F7 G1
*methane, *liquid, *solidified gas, *vapor pressure, isotope,

12266 Ergebnisse der Tieftemperaturforschung XXXI. Die Schmelzkurven von Kohlendioxyd und Distickstoffoxyd bis 250 Atm. und ihr Volumensprung am Schmelzpunkt. The melting curve of carbon dioxide and dinitrogen oxide up to 250 atmospheres and their volume change at the melting point
Clusius,K. Piesbergen,U. Varde,E.
Helv. Chim. Acta 43, No. 162, 1290-98 (1960) 2 fig 5 tab 16 ref
A3 B3 C8 D1 E1 F7 G1
*carbon dioxide, *inorganic fluid, oxide of nitrogen, *melting curve, *solidified gas, *vapor pressure, *triple point,

12267 Ergebnisse der Tieftemperaturforschung XXXVIII. Die Schmelzkurve des Stickstoffs bis 250 Atm und des Stickstoffmonoxyds bis 75 Atm. The melting curve of nitrogen up to 250 atmospheres and for nitrogen monoxide up to 75 atm.
Clusius,K. Piesbergen,U. Varde,E.
Helv. Chim. Acta 42, No. 254, 2356-64 (1959) 4 fig 4 tab 21 ref
A3 B3 C7 D1 E1 F G1
*nitrogen, *inorganic fluid, oxide of nitrogen, *solidified gas, *melting curve, *vapor pressure, *density, *heat of fusion,

12287 Second virial coefficients and kihara parameters for argon
Myers,A.L. Prausnitz,J.M.
Physica 28, No. 3, 303-04 (Mar 1962) 4 ref
A3 B1 C7 D1 E2 F6 G1
*argon, *gaseous, intermolecular potential, second virial coefficient

12295 Ergebnisse der Tieftemperaturforschung XXXVII. Vergleich der Atom- und Molekülvolumen sowie der Entropien der kondensierten Isotope 20Ne und 22Ne. Comparison of the atomic heat and latent heat of fusion and also the entropy of condensation of the 20Ne and 22Ne isotopes.
Clusius,K. Flubacher,P. Piesbergen,U. Schleich,K. Sperandio,A.
Z. Naturforsch. 15a, 1-9 (1960) 4 fig 6 tab 23 ref
A3 B3 C6 D1 E1 F7 G1
*neon, *solidified gas, *isotope, *specific heat, atomic heat, melting temperature, *debye constant, *heat of fusion, temperature effect, *entropy

12298 The thermodynamic properties of nitrogen from 64 to 300 degrees K between 0.1 and 200 atmospheres
Strobridge,T.R.
Natl. Bur. Standards Tech. Note 129 (Jan 1962) 85 pp 2 tab 20 ref
A3 B1 C7 D1 E2 F3 G3
*nitrogen, *liquid, *gaseous, *entropy, *enthalpy, *density, *internal energy. *equation of state, *specific heat, *vapor pressure, equation, calculation, saturated liquid

12353 Thermal conductivity of liquid helium I.
Grenier,Claude
LOW TEMPERATURE PHYSICS 193-94, Natl. Bur. Standards Circ. 519, U.S. Gov't. Printing Office, Wash. D.C. (Oct 1952) 1 fig 1 tab 4 ref
A3 B1 C5 D1 E1 F6 G2
*helium, helium I, *liquid, *thermal conductivity, temperature

12356 Heat capacity of solid deuterium from 1.3 degrees to 12 degrees K
Gonzales,O.D. White,D. Johnston,H.L.
LOW TEMPERATURE PHYSICS 274, Natl. Bur. Standards Circ. 519, U.S. Gov't. Printing Office, Wash. D.C. (Oct 1952) 3 ref
A3 B1 C4 D1 E1 F6 G2
*deuterium, orthodeuterium, *specific heat, temperature

12357 Compressibility of liquid normal hydrogen from the boiling point to the critical point at pressures up to 100 atmospheres.
Keller,W.E. Friedman,A.S. Johnston,H.L.
LOW TEMPERATURE PHYSICS 274, Natl. Bur. Standards Circ. 519, U.S. Gov't. Printing Office, Wash. D.C. (Oct 1952) 1 ref
A3 B1 C6 D2 E3 F6 G2 52
*hydrogen, *liquid, *compressibility, normal hydrogen,

12373 Liquid-vapour equilibrium of the system argon plus oxygen at pressures up to 10 atmospheres
Burn,I. Din,F.
Trans. Faraday Soc. 58, No. 475 Pt. 7, 1341-56 (Jul 1962) 6 fig 15 tab 16 ref
A3 B1 C7 D1 E1 F6 G1
*oxygen, *argon, *gaseous mixture, *liquid mixture, *phase equilibrium, *vapor pressure, liquid-vapor equilibrium,

12381 Phase-equilibria of some binary systems at low temperatures.
Omar,M.H.
Leiden Univ. Netherlands, Ph.D. Thesis (Jun 1962) 55 pp
A3 B1 C7 D1 E1 F9 G7 62
*gaseous mixture, *liquid mixture, *hydrogen, *nitrogen,

12386 An X-ray diffractometer cryostat providing temperature control in the range 4 to 400 degrees K
Mauer,F.A. Bolz,L.H.
J. Research Natl. Bur. Standards 65C, No. 4, 225-29 (Oct-Dec 1961) 4 fig 7 ref (Abstracted in Bull. inst. intern. froid 42, No. 9, 394 (1962)
A3 B1 C5 D E1 F6 G1
*neon, *solidified gas, lattice parameter, *expansivity, thermal expansion, *measuring equipment, diffractometer,

12405 A generalized method for estimation of heat of vaporization
St. Pierre,C. Chi Tien
Can. J. Chem. Eng. 39, 170-71 (Aug 1961)
A3 B1 C7 D3 E3 F7 G1
*argon, chlorine, *carbon dioxide, hydrogen chloride, hydrogen sulfide, carbon tetrachloride, sulfur dioxide, *oxygen, *carbon monoxide, *nitrogen, freon, hydrogen cyanide, *heat of vaporization, compressibility factor

12420 Volumetric properties of gas mixtures containing one or more polar components.
Blanks,R.F. Prausnitz,J.M.
A.I. Ch. E. Journal 8, No. 1, 86-92 (Mar 1962) 6 fig 3 tab 26 ref
A3 B1 C2 D3 E3 F6 G1 62
*equation of state, second virial coefficient, calculation, intermolecular potential, *water, *oxygen, pentane, *hydrogen, krypton, *methane, *nitrogen, *organic fluid, *hydrocarbon,

12422 Summarized proceedings of a symposium on the generation of temperatures below 1 degree K - London, December 1959.
Parkinson,D.H.
Brit. J. Appl. Phys. 11, No. 10, 449-53 (Oct 1960) 6 fig 25 ref
MF No. 169-E A5 B1 C4 D3 E2 F7 G1
adiabatic demagnetization, *Helium, *low temperature production, helium, helium 3, helium 3-helium 4, *vapor pressure, helium 4,

12424 The second virial coefficients of the hydrogen isotopes between 20 and 70 degrees K
Knaap,H.F.P. Knoester,M. Knobler,C.M. Beenakker,J.J.M.
Physica 28, 21-32 (1962) 6 fig 5 tab 19 ref
A3 B1 C6 D1 E1 F6 G1
*hydrogen, *deuterium, *hydrogen deuteride, *gaseous, *equation of state, second virial coefficient, temperature effect

12429 Thermodynamic functions of several triatomic molecules in the ideal gas state
McBride,B.J. Sanford,G.
J. Chem. Phys. 35, No. 6 (Dec 1961)
A3 B1 C7 D1 E3 F6 G1
*carbon dioxide, *water, *inorganic fluid, cyanide, hydrogen, hydrogen sulfide, sulfur dioxide, oxide of nitrogen, *specific heat, *entropy, *enthalpy, *free energy

12485 Analytical investigation of two-phase vapor-liquid ratio measuring systems and two-phase flow literature survey supplement.
Ward,H.C. Rhodes,J.E. Ziegler,W.T. Ross,L.W.
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ASTIA AD 273 146 A6 B1 C6 D3 E3 F5 G5
*fluid flow, two-phase flow, *hydrogen, mathematical analysis, equation, *measuring equipment, *flow measurement, review, *parahydrogen, *liquid, *gaseous, *critical constants, *vapor pressure, *density, saturated liquid, saturated vapor, *heat of vaporization, *PVT data, *specific heat, *velocity of sound, *thermal conductivity, *dielectric constant,

12489 Thermal conductivity of equilibrated mixtures of H2, D2 and HD
Minter,C.C. Schuldiner,S.
J. Chem. Eng. Data 4, 225-26 (1959)
A3 B1 C2 D1 E1 F6 G1
*thermal conductivity, *gaseous mixture, *binary system, ternary system, *hydrogen, *deuterium, *hydrogen deuteride,

12501 Thermodynamic diagrams of helium-containing gaseous systems. I. A temperature-enthalpy chart for cliffside gas
Brandt,L.W. Stroud,L.
U.S. Bur. Mines, Phase Equilibrium and Thermodynamics Branch, Rept. No. 8 (Jul 1955) 55 pp 22 fig 7 tab 28 ref
A3 B1 C7 D1 E1 F9 G9
*gaseous mixture, *multicomponent system, *methane, *ethane, *propane, *butane, *nitrogen, *helium, *enthalpy, T-H diagram,

12502 An experimental study of the phase relationships, dewpoints and compressibility factors of keys gas
Brandt,L.W. Stroud,L. Bruce,H.E.
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A3 B1 C7 D1 E1 F9 G9
*gaseous mixture, *multicomponent system, *methane, *ethane, *propane, *butane, *nitrogen, *helium, *enthalpy, T-H diagram,

12503 Determination of the solid-liquid equilibrium diagram for the nitrogen-methane system.
Omar,M.H. Dokoupil,Z. Schroten,H.G.M.
Physica 29, No. 4, 309-29 (Apr 1962) 15 fig 3 tab 32 ref
A3 B1 C7 D1 E1 F6 G1 62
*liquid mixture, *phase equilibrium, solid-liquid equilibrium, *methane, *nitrogen, *specific heat, concentration effect,

12506 On the increase of the boiling temperature of liquid oxygen in a magnetic field
Dupre,A. Van Itterbeck,A. Brandt,G.
Physica 28, No. 4, 353-56 (Apr 1962) 3 fig 3 ref
A3 B1 C7 D3 E1 F6 G1
*oxygen, *liquid, *boiling temperature, magnetic field

12540 Provisional thermodynamic functions for para-hydrogen
Roder,H.M. Goodwin,R.D.
Natl. Bur. Standards Tech. Note No. 130 (Dec 1961) 139 pp 13 ref (Available from OTS PB No. 161631)
A3 B1 C6 D1 E2 F3 G6
*para hydrogen, *hydrogen, *gaseous, *entropy, *enthalpy, *internal energy, *density, calculation, equation, PVT data,

12568 Thermodynamic properties of krypton. Vibrational and other properties of solid argon and solid krypton
Beaumont,R.H. Chihara,H. Morrison,J.A.
Proc. Phys. Soc. 78, 1462-81 (1961) 11 fig 9 tab 52 ref
A3 B1 C5 D1 E1 F6 G1
*rare gas, krypton, *solidified gas, *specific heat, *vapor pressure, *liquid, *triple point, *heat of fusion, *heat of vaporization, *debye constant, temperature effect, *argon,

12578 The viscosity of gases at high pressures
Comings,E.W. Mayland,B.J. Egly,R.S.
Illinois Univ. Eng. Expt. Sta. Urbana, Bull., No. 354 (Nov 1944) 66 pp 23 fig 47 ref
MF No. 143-Q A3 B1 C2 D1 E1 F8 G5
*carbon dioxide, *ethylene, *methane, *propane, *viscosity,

12596 The thermodynamic properties of parahydrogen from 1 degree to 22 degrees K
Mullins,J.C. Ziegler,W.T. Kirk,B.S.
Georgia Inst. of Technol., Atlanta, Tech. Rept. No. 1 (Nov 1961) Contr. No. CST-7339, Proj. No. A-593, 69 pp 1 fig 11 tab 12 ref
A3 B1 C5 D1 E3 F8 G5
*parahydrogen, *liquid, *solidified gas, *specific heat, *PVT data, compressibility factor, *heat of vaporization, *enthalpy, *entropy, *gaseous, T-S diagram, calculation

12611 Measurements on the velocity of sound in gaseous normal hydrogen up to 75 atm
Van Itterbeck,A. Van Dael,W. Forrez,G. Dreesmans,G.
Bull. inst. intern. froid Annexe 1960-1, 91-97 (Jun 1960) 6 fig 4 tab 9 ref
A3 B1 C7 D1 E1 F7 G1
*hydrogen, *gaseous, *velocity of sound, normal hydrogen, high pressure, pressure effect, specific heat ratio

12616 The thermodynamic properties of dense gases and liquids
Levelt,J.M.H. Cohen,E.G.D.
Bull. inst. intern. froid Annexe 1960-1, 129-32 (Jun 1960) 7 ref
A3 B1 C7 D1 E3 F7 G1
*inert gas, *thermodynamic property, calculation, intermolecular

12617 The intermolecular field of hydrogen and deuterium
De Graaff,W. Ten Seldam,C.A.
Bull. inst. intern. froid Annexe 1960-1, 153-35 (Jun 1960) 2 fig 2 ref
A3 B1 C7 D1 E3 F7 G1
*hydrogen, *deuterium, *equation of state, virial coefficient,

12621 T .modynamic properties of mixtures at low temperatures
Beenakker,J.J.M. Knaap,H.F.P. Knobler,C.M.
Bull. inst. intern. froid Annexe 1960-1, 163-67 (Jun 1960) 6 fig 1 tab
A3 B1 C6 D1 E1 F7 G1
*gaseous mixture, *binary system, *thermochemistry, heat of mixing, *oxygen, *nitrogen, *argon, *hydrogen, para hydrogen, *deuterium, *helium, *hydrogen deuteride, second virial coefficient

12631 Comparaison du mouvement amorti d'un disque horizontal et d'un disque vertical dans les gaz. Comparison between the damping of a horizontal and a vertical disc in gases
Van Itterbeek,A. Van Paemel,O.
Bull. inst. intern. froid Annexe 1960-1, 243-50 (Jun 1960) 10 fig 1 tab 2 ref
A7 B2 C6 D3 E1 F7 G1
*viscometry, rayleigh disc, maxwell disc, gaseous, *viscosity, pressure effect, *hydrogen, *helium, *nitrogen, *argon, *air

12637 Enthalpy of gaseous mixtures
Dokoupil,Z.
Bull. inst. intern. froid Annexe 1960-1, 277-78 (Jun 1960) 1 fig 6 ref
A7 B1 C1 D2 E2 F7 G1
*measurement, enthalpy, mixture, *gaseous mixture, *hydrogen, *nitrogen, pressure effect, *equation of state

12638 The enthalpy of gas and liquid mixtures
Din,F.
Bull. IIR Annexe 1960-1, 279-86 (Meeting of Comm. 1, Eindhoven, Jun 28-30, 1960) 2 fig 5 ref
A3 B1 C7 D3 E2 F7 G2
*gaseous mixture, *liquid mixture, *binary system, *enthalpy, equation, *nitrogen, *oxygen, concentration effect

12642 Measurements on the velocity of ultrasonic waves in liquid helium
Van Itterbeek,A. Forrez,G. Teirlinck,M.
Physica 23, 905-6 (1957) 2 tab 1 ref
A3 B1 C4 D1 E1 F6 G1
*helium, *liquid, *velocity of sound, microwave, frequency effect

12643 Sound velocity measurements in liquid argon under high pressure
Van Itterbeek,A. Grevendonk,W. Van Dael,W. Forrez,G.
Physica 25, 1255-58 (1959) 2 fig 2 tab 5 ref
A3 B1 C7 D1 E1 F6 G1
*argon, *liquid, saturated liquid, *velocity of sound, equation,

12647 New "Charles' Law" at extreme pressures
Levitt,L.S.
Am. Phys. Soc. Meeting, Honolulu (Aug 27-29, 1959) Paper SN9 (Abstracted in Bull. Am. Phys. Soc. 4, No. 6, 376, Aug 1959) 1 ref
A4 B1 C1 D E2 F8 G2
*nitrogen, *argon, *PVT data, isobar, very high pressure, *compressibility, *entropy

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Ziegler,W.T. Mullins,J.C. Kirk,B.S.
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A3 B1 C6 D1 E2 F8 G5
*argon, *liquid, *solidified gas, *entropy, *triple point, *equation of state, *vapor pressure, *heat of vaporization, second virial coefficient, *heat of sublimation, temperature effect, saturated liquid, *density, *specific heat

12680 Semiconductors at low termperatures
Johnson,V.A. Lark-Horovitz,K.
PROGRESS IN LOW TEMPERATURE PHYSICS. Vol. II, Chapt. 7, 187-225, North Holland Publishing Co. Amsterdam (1957) 8 fig 192 ref

12689 Liquid helium below 1 degree K
Kramers,H.C.
PROGRESS IN LOW TEMPERATURE PHYSICS. Vol. II, Chapt. 2, 59-82
North Holland Publishing Co., Amsterdam (1957) 9 fig 44 ref
A4 B1 C4 D3 E2 F7 G2
*helium, *liquid, *specific heat, *expansivity, temperature

12698 The measurement of the viscosity of gases at high pressures. The viscosity of nitrogen to 1000 atms
Michels,A. Gibson,A.O.
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MF No. 143-U A3 B1 C2 D1 E1 F6 G1
*nitrogen, *gaseous, *viscosity, high pressure, pressure effect, *density

12701 Further experiments with liquid helium. X. The rectilinear diameter of helium
Mathias,E. Crommelin,C.A. Onnes,H.K. Swallow,J.C.
Communs. Phys. Lab. Univ. Leiden No. 172b, 1-22 (1924) 2 fig
A3 B1 C5 D1 E1 F7 G1
*helium, *density, *liquid, *gaseous, saturated liquid, law of rectilinear diameters, saturated vapor

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Stewart,R.B. Johnson,V.J.
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A3 B1 C5 D1 E2 F1 G6
*helium, *hydrogen, *neon, *argon, *fluorine, *nitrogen, *oxygen, *carbon monoxide, *methane, *air, *compressibility factor,

12710 The temperature scale in the liquid helium region
Van Dijk,H. Durieux,M.
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A3 B1 C5 D1 E2 F7 G2
*helium, *liquid, *vapor pressure, saturated liquid, *PVT data, *heat of vaporization

12725 The equation of state of the hydrogen isotopes and their mixtures with helium below the boiling point of hydrogen
Varekamp,F.H. Beenakker,J.J.M.
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A3 B1 C6 D1 E1 F6 G1
*hydrogen, *ortho-para hydrogen, *hydrogen deuteride, *deuterium, *gaseous mixture, *helium, *PVT data, *equation of state, second virial coefficient, *density, concentration effect, temperature

12727 The density of liquid oxygen on the saturation curve
Timrot,D.L. Borisoglebskii,V.P.
Soviet Phys. JETP 11, No. 6, 1248-50 (Dec 1960) 2 fig 1 tab 9 ref
A3 B1 C7 D1 E1 F6 G1
*oxygen, *liquid, *density, saturated liquid

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Smith,B.T.
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MF No. 155-U A3 B1 C7 D3 E1 F6 G1
*rare gas, krypton, *argon, *density, *solidified gas, *refractive index, lorentz function

12739 The virial coefficients of helium from 20 to 300 degrees K
White,D. Rubin,T. Camky,P. Johnston,H.L.
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MF No. 154-I A3 B1 C6 D1 E1 F6 G1
*helium, *gaseous, *PVT data, *equation of state, virial coefficient, isotherm, second virial coefficient, third virial

12751 The difference in vapor pressures of ortho and paradeuterium
Brickwedde,F.G. Scott,R.B. Taylor,H.S.
J. Res. Natl. Bur. Standards 15, 463-75 (Nov 1935) Research Paper RP841 3 fig 7 tab 16 ref
A3 B1 C6 D1 E1 F6 G1
*deuterium, *vapor pressure, *paradeuterium, ortho deuterium, heat of vaporization, *ortho para conversion

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Ellinton,R.T. Bloomer,O.T. Eakin,B.E. Gami,D.C.
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A3 B1 C7 D1 E2 F6 G2
*gaseous mixture, *methane, *nitrogen, *binary system, *equation of state, *PVT data, compressibility factor, *entropy, *enthalpy, mollier diagram, T-S diagram, concenrtration effect, temperature

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A3 B1 C2 D3 E2 F6 G2
*gaseous mixture, *equation of state, *binary system, calculation, benedict-webb-rubin equation, *carbon dioxide, *methane, *ethane,

12786 An equation for the critical isotherm of gases
Roebusch,U.K.
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A3 B1 C1 D3 E2 F6 G2
*critical constant, critical temperature, *reduced variable, isotherm, principle of corresponding states, calculation, *ethylene, *propane, *butane, *rare gas, xenon, *carbon dioxide,

12788 Thermal conductivity of helium-air mixtures
Eckert,E.R.G. Ibele,W.E. Irvine,T.F.Jr.
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A3 B1 C8 D1 E1 F6 G2
*thermal conductivity, *gaseous mixture, *helium, *air, *binary

12790 Thermodynamic and transport properties of gaseous carbon dioxide
Chen,L.H.
THERMODYNAMIC AND TRANSPORT PROPERTIES OF GASES, LIQUIDS AND SOLIDS, 358-69, Am. Soc. Mech. Engrs. Heat Transfer Div., McGraw Hill, New York (1959) 10 fig 4 tab 38 ref
A3 B1 C8 D1 E1 F6 G2
*carbon dioxide, *gaseous, *enthalpy, *entropy, *density, *specific heat, *viscosity, specific heat ratio, *velocity of sound, *thermal conductivity, prandtl number

12791 Compressibilities of hydrogen between 0 degrees C and 150 degrees C up to 3000 atm
Michels,A. Goudeket,M.
Physica 8, No. 3, 347-52 (1941)
MF No. 62-J A3 B1 C2 D1 E1 F6 G1
*hydrogen, *compressibility, *virial coefficient, second virial

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Lounasma,O.V.
Ph.D., Univ. of Oxford, Brasenose College, 1-171 (1958)
MF No. 68-J A3 B1 C1 D1 E1 F9 G7
*helium, *specific heat, *entropy, *internal energy, *enthalpy,

12793 Cycle Frigorifique a Methane Avec Detente Adinbatique et Detente Isenthalpique. Methane cycle with isenthalpic and isentropic expansions for low temperature refrigeration
Charcosset,C.
Bull. inst. intern. froid Annexe 1960-63, 183-96 (Sept 1960) 7 fig 1 tab
A6 B2 C7 D1 E1 F7 G1
*refrigeration, methane, J-T cooling, expansion engine, *enthalpy, *gaseous

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McCarty,R.D. Stewart,R.B.
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A3 B1 C6 D1 E2 F6 G2 62
*helium, *gaseous, *equation of state, *density, *joule-thomson coefficient, *PVT data, compressibility factor, T-S diagram, *entropy, *enthalpy, temperature effect, calculation;

12802 The thermodynamic properties of oxygen from 20 degrees to 100 degrees K
Mullins,J.C. Ziegler,W.T. Kirk,B.S.
Georgia Inst. of Technol., Atlanta, Tech. Rept. No. 2 (Mar 1962) Contr. No. CST-7339, Proj. No. A-593, 102 pp 4 fig 17 tab 46 ref
A3 B1 C6 D1 E3 F8 G5
*oxygen, *liquid, *solid, calculation, *heat of vaporization, *phase transition property, saturated liquid, *density, *triple point, *entropy, *enthalpy, *vapor pressure, second virial

12817 Apparatus for determination of pressure-density-temperature relations and specific heats of hydrogen to 350 atmospheres at temperatures above 14 degrees K
Goodwin,R.D.
J. Research Natl. Bur. Standards 65C, No. 4, 231-43 (Oct-Dec 1961) 8 fig 7 tab 79 ref
A3 B1 C6 D1 E1 F6 G1
*hydrogen, *parahydrogen, *gaseous, *liquid, *vapor pressure, *PVT data, *equation of state, virial coefficient, temperature

12820 Compressibility of 1:3 nitrogen hydrogen
Deffet,L.
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MF No. 161-0 A3 B1 C2 D1 E1 F7 G1
*nitrogen, *hydrogen, *compressibility, *gaseous mixture,

12827 The thermodynamic properties of oxygen from 20 degrees to 100 degrees K
Mullins,J.C. Ziegler,W.T. Kirk,B.S.
Cryogenic Eng. Conf., Los Angeles, Calif. (Aug 14-16, 1962) Paper C-2, 30 pp 3 fig 8 tab , 29 ref
A3 B1 C6 D1 E3 F8 G9
*oxygen, *liquid, *solidified gas, *boiling temperature, *triple point, *heat of vaporization, *heat of fusion, *phase transition property, solid-solid transition, *specific heat, *density, *equation of state, compilation, *vapor pressure, *heat of sublimation, *entropy, T-S diagram, calculation

12828 Thermodynamic properties of oxygen-nitrogen mixtures and air at saturation.
Wilbers,O.J.
Cryogenic Eng. Conf., Los Angeles, Calif. (Aug 14-16, 1962) Paper C-9, 22 pp 8 fig 10 ref
A3 B1 C7 D3 E2 F8 G9
*oxygen, *nitrogen, *air, *liquid, *gaseous, *density, saturated liquid, saturated vapor, *vapor pressure, *heat of vaporization, *enthalpy, compilation, temperature effect, *gaseous mixture,

12829 The experimental measurement of gas compressibility factors at low temperatures and the derivation of virial coefficients therefrom
Canfield,F.B. Leland,T.W. Kobayashi,R.
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A3 B1 C7 D1 E1 F8 G9
*helium, *nitrogen, *gaseous mixture, *gaseous, *PVT data, compressibility factor, *binary system, concentration effect, second virial coefficient, third virial coefficient

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Mullins,J.C. Ziegler,W.T. Kirk,B.S.
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A3 B1 C5 D1 E3 F8 G9
*parahydrogen, *liquid, *solidified gas, *boiling temperature, *triple point, *heat of fusion, *heat of vaporization, *vapor pressure, *entropy, *heat of sublimation, T-S diagram, calculation, temperature effect

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oxygen, liquid, phase transition, multi-phase, steady state, single component, gas, boiling, *heat trasfer;
A3 B1 C7 D1 E1
*oxygen, *liquid, *enthalpy, saturated liquid, saturated vapor, *boiling temperature

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Timrot,D.L. Borisoglebskiy,V.P.
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ASTIA AD 269 643 A3 B1 C7 D2 E F5 G1
*oxygen, *liquid, *density, temperature effect, pressure effect

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McCall,D.M. Pain,H.J.
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A3 B1 C6 D1 E1 F8 G5
*hydrogen, *liquid, *thermal conductivity, pressure effect,

12849 Thermal conductivity of gases. I. Thermal conductivity of carbon dioxide near the critical point
Guildner,L.A.
J. Research Natl. Bur. Standards 66A, No. 4, 341-47 (Jul-Aug 1962) 6 fig 3 tab 3 ref
A3 B1 C8 D1 E1 F6 G1
*carbon dioxide, *gaseous, *liquid, *critical region, *thermal conductivity, *density, pressure effect, *heat transfer, *fluid

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Omar,M.H. Dokoupil,Z.
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A3 B1 C6 D1 E1 F6 G1
*liquid mixture, *hydrogen, *oxygen, *phase equilibrium, solid-vapor equilibrium, *PVT data, isotherm, isobar, *binary

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Kielich,S.
Physica 28, No. 5, 511-20 (May 1962) 3 tab 20 ref Physica 28, No. 11, 1123 (Nov 1962) - Erratum
A3 B1 C8 D1 E2 F6 G1
*hydrogen, *nitrogen, *oxygen, *carbon dioxide, *gaseous, *equation of state, second virial coefficient, calculation, *atomic molecular property, intermolecular force, *helium,

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Ent,W.L.
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*oxygen, liquid, *purification, space application, solubility, contamination, *vapor pressure, *nitrogen, *argon, *methane,

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*neon, *argon, *helium, *hydrogen, *liquid, *nitrogen, *oxygen, *halogen, chlorine, *organic fluid, benzene, *surface tension,

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A3 B1 C1 D1 E3 F8 G2
*neon, *argon, *rare gas, *specific heat, krypton, xenon, *thermal property, *solidified gas, lattice parameter,

12925 Thermal conductivity of solid argon
Lawrence,D.J. Guptill,E.W. Stewart,A.T.
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*argon, *solidified gas, *thermal conductivity

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*helium, *hydrogen, *argon, *gaseous, *transport porperty, thermal conductivity, viscosity, *oxygen, *nitrogen, *carbon dioxide, kinetic theory, prandtl number

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*compressibility factor, *argon, *reduced variable, enskog formula, theory of corresponding states

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*propellant, *liquid, hydrogen peroxide, melting temperature, *boiling temperature, *heat of vaporization, *fluorine, *oxygen, *ozone, *ammonia, boron hydride, *hydrogen, *methane, *specific heat

13036 On the thermodynamic phase diagrams of helium three
Goldstein,Louis
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A3 B1 C4 D3 E3 F6 G1
*helium, helium 3, *melting curve, *liquid, *PVT data, *expansivity, thermal expansion, anomaly, *solidified gas

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Krieger,F.J.
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*hydrogen, *ammonia, *water, *methane, *entropy, *enthalpy,

13081 The thermal conductivity of ideal dielectric crystals
Wilks,J.
Bull. IIR Annexe 1952-1, 135-40 (Presented at Meeting of Comm. 1 & 2, Louvain, Jun 9-11, 1952) 4 fig 10 ref
A2 B1 C5 D3 E2 F7 G1
*quarts, *inorganic solid, sapphire, *thermal conductivity, temperature effect, review, *helium, *solidified gas, mean free path

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Van Itterbeek,A. Forrez,G. Sluijter,C.G. Vaes,G.
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A7 B1 C6 D1 E1 F7 G1
*velocity of sound, *hydrogen, *nitrogen, *oxygen, *gaseous

13110 The condensed-phase diagram of the ternary system oxygen-nitrogen-argon.
Long,H.M. Di Paolo,F.S.
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A3 B1 C7 D3 E1 F7 G2 S3
*ternary system, *oxygen, *nitrogen, *argon, *liquid mixture, *phase equilibrium, *phase diagram, liquid-vapor equilibrium,

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Coremans,J.M.J. Beenakker,J.J.M. Van Itterbeek,A. Zandbergen,P.
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A3 B1 C6 D3 E1 F7 G1
*helium, *neon, *hydrogen, *deuterium, *viscosity, temperature

13114 The influence of the density on the viscosity of helium gas at liquid hydrogen temperatures
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A3 B1 C6 D3 E1 F7 G1
*helium, *gaseous, *viscosity, *density, temperature effect,

13125 Density of liquid oxygen between 90 degrees and 105 degrees K as a function of pressure and temperature
Ricketson,B.W.A.
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ASTIA AD 272 892 A3 B1 C7 D1 E2 F5 G5
*oxygen, *liquid, *density, temperature effect, pressure

13128 Refractive index of 4He
Edwards,M.H.
Physica 24, S138 (Sept 1958)
A3 B1 C5 D1 E1 F6 G1
*helium, helium 4, *liquid, *gaseous, saturated vapor, *refractive index, *expansivity, thermal expansion

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Maxwell,E. Chase,C.E.
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A3 B1 C5 D E1 F6 G1
*helium, *liquid, *compressibility, *dielectric constant, *expansivity, thermal expansion

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*helium, helium 4, *liquid, *vapor pressure, temperature effect,

13161 Vapor pressure data for some common gases
Monig,R.E. Hook,H.O.
RCA Rev. 21, 360-68 (Sept 1960) 1 fig 2 tab 33 ref
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*argon, *methane, *carbon monoxide, *hydrogen, *rare gas, krypton, *nitrogen, xenon, *neon, *oxygen, melting temperature, *boiling temperature, *vapor pressure, *phase transition property,

13228 Solidification of helium at 77 degrees K
Langer,D.W.
Phys. Chem. Solids 21, No. 1-2, 122-25 (Oct 1961) 1 fig 7 ref
MF No. 161-Q A3 B1 C7 D3 E1 F6 G1
*helium, helium 4, *solidified gas, *vapor pressure, equation,

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Tans,A.M.P.
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A3 B1 C7 D3 E2 F7 G1
*density, *oxygen, *liquid, nomogram

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*argon, *liquid, *gaseous, *velocity of sound, *joule-thomson coefficient, *density, *PVT data, *equation of state, *specific heat, *internal energy, *entropy, *enthalpy,

13259 The thermodynamic properties of helium from 3 to 300 degrees K between 0.5 and 100 atmospheres
Mann,D.B.
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A3 B1 C5 D1 E2 F2 G6
*helium, *gaseous, *liquid, saturated vapor, saturated liquid, *density, *entropy, *enthalpy, *internal energy, *critical region,

13270 Viscosity of binary mixtures of hydrogen isotopes and mixtures of He and Ne
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MF No. 158-U A3 B1 C6 D1 E1 F6 G1
*gaseous mixture, *liquid mixture, *hydrogen, *deuterium, *hydrogen deuteride, *viscosity, concentration effect, *binary system, temperature effect, *helium, *neon, *viscosity

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*hydrogen, *liquid, *specific heat, calculation, equation, theory

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A3 B1 C6 D1 E2 F9 G8
*helium, *entropy, *liquid, *density, *T-S diagram, *enthalpy, saturated liquid, *specific heat, *gaseous, *PVT data,

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Specific heats of helium vapours below 4.2 degrees K
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MF No. 162-C A3 B4 C1 D1 E1 F7 G1
*velocity of sound, *helium, *oxygen, *carbon dioxide, *hydrogen, *gaseous, pressure effect, *specific heat, specific heat ratio

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Smith,G.E. Sonntag,R.E. Van Wylen,G.J.
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A3 B1 C7 D1 E3 F8 G9
enrichment, *phase equilibrium, solid-vapor equilibrium, *carbon dioxide, *nitrogen, *binary system, *gaseous mixture, *equation of state, benedict-webb-rubin equation of state,

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A3 B1 C6 D1 E3 F8 G9
*neon, *PVT data, compressibility factor, *density, theory of corresponding states, saturated liquid, saturated vapor,

13344 Experimental determination of the bulk density of boiling liquid oxygen
Arnett,R.W. Millhiser,D.R. Probert,W.H.
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A3 B1 C7 D1 E1 F8 G9
*oxygen, *liquid, *density, boiling liquid, saturated liquid

13345 Density determination of cryogenic liquids versus saturated vapor pressure
Shupert,T.C.
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A3 B1 C7 D1 E1 F8 G9
*density, *vapor pressure, *oxygen, *liquid

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*gaseous mixtures, solubility, *binary system, *helium, *ammonia, carbon dioxide, *critical region, gas liquid equilibria, *phase equilibrium, *vapor pressure

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vacuum techniques, vacuum gage, *refrigeration, review, *critical constant, *boiling temperature, *carbon dioxide, *thermal properties, *refrigerant, sulfur dioxide, *ammonia, freon 11, freon 12, freon 22, freon 113, methyl chloride

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*oxygen, *nitrogen, *liquid mixture, *binary system, *phase equilibrium, concentration effect, *gaseous mixture, *enthalpy, *equation of state, *heat of vaporization, mollier diagram,

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Shearer,J.S.
Phys. Rev. 17, 469-75 (1903) 5 fig 3 tab 2 ref
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*oxygen, *nitrogen, *air, *liquid, *heat of vaporization, *binary system, *liquid mixture, *gaseous mixture, *phase equilibrium,

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Onnes,H.K. Braak,C.
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A3 B1 C7 D1 E1 F7 G1
*oxygen, *liquid, *vapor pressure, saturated liquid, *boiling temperature

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A3 B2 C6 D1 E3 F7 G1
*argon, *oxygen, *nitrogen, *hydrogen, *gaseous, *liquid, *heat of vaporization, calculation, *specific heat, saturated liquid,

13381 The diagram of state and specific heats of liquid argon
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A3 B1 C7 D3 E1 F7 G2
*argon, *liquid, *PVT data, isochore, *specific heat, temperature

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A3 B1 C7 D1 E3 F7 G1
*oxygen, *nitrogen, *liquid, *vapor pressure, calculation,

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Cockett,A.H.
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*oxygen, *nitrogen, *gaseous mixture, *liquid mixture, *phase equilibrium, *binary system, vapor-liquid equilibrium, PT-X data, concentration effect, temperature effect, *vapor pressure

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Grilly,E.R.
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A3 B1 C6 D1 E1 F7 G1
*neon, *liquid, *solidified gas, *vapor pressure, *heat of vaporization, temperature effect

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*liquid mixture, *argon, *rare gas, krypton, *solidified gas, *melting curve, heat of mixing, critical temperature

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ASTIA AD 232 045 A6 B1 C7 D1 E1 F5 G5
*adsorption, krypton, iron, copper, carbon, sodium, tungsten, argon, adsorption isotherm, *density, *solid, polarization,

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*heat exchanger, *hydrogen, parahydrogen, *helium, design, *testing, *gaseous, *specific heat, *viscosity, *thermal conductivity, prandtl number, *transport property, *density,

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Whitney,W.M. Chase,C.E.
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A3 B1 C4 D1 E1 F8 G2
*helium, *liquid, saturated liquid, *velocity of sound, temperature effect

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*methane, *gaseous, *liquid, saturated vapor, saturated liquid, *specific heat, *entropy, *enthalpy, *density, *joule-thomson coefficient, *chemical potential, *ethane, T-S diagram, compressibility factor, *nitrogen, *solidified gas

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ASTIA AD 226 217 A3 B1 C7 D1 E3 F5 G5
*argon, *rare gas, xenon, *gaseous, *PVT data, compressibility factor, *internal energy, *entropy, *reduced variable, law of corresponding states, lennard-jones function, intermolecular

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A3 B1 C7 D1 E3 F6 G1 G2
*vapor pressure, *equation of state, *refrigerant, *liquid, *carbon monoxide, *carbon dioxide, *hydrogen, *nitrogen, *oxygen,

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A3 B3 C1 D1 E3 F7 G1
law of corresponding states, *reduced variable, *methane, *nitrogen, *organic fluid, *critical constant, *density, *expansivity, *inert gas, *liquid, freon 13, *carbon monoxide, *hydrogen, xenon

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*reduced variable, law of corresponding states, equation, *vapor pressure, critical constant, freon 13, *organic fluid, *technical gas, *helium, *hydrogen, *neon, *argon, carbon

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*organic fluid, *inorganic fluid, critical constant, *ethane, *methane, *neon, freon 113, *refrigerant, *compressibility factor, *vapor pressure, *heat of vaporization, entropy,

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*argon, *carbon monoxide, *methane, *nitrogen, *oxygen, *solidified gas, *vapor pressure, equation, calculation, enthalpy, temperature effect, *specific heat, *phase transition property, solid-solid transition

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*hydrogen, *gaseous, *thermal conductivity, normal hydrogen, *para hydrogen, *viscosity, *liquid, calculation

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*carbon dioxide, *solidified gas, *liquid, *gaseous, *specific heat, *phase transition property, sublimation, *critical constant, *joule-thomson coefficient, *entropy, *enthalpy, *density, T-S diagram, *carbon monoxide, *ammonia, *triple point, *boiling temperature, *heat of fusion, *vapor pressure, *heat of vaporization, solid-solid transition

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*oxygen, *liquid, *density, pressure effect, *storage, *heat transfer, ullage space, space application

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A3 B1 C8 D1 E3 F6 G1
*ethane, *hydrocarbon, pentane, *liquid mixture, *binary system, *enthalpy, concentration effect, saturated liquid, pressure effect, calculation

13492 Hydrogen transport property correlations.
Rogers,J.D. Zeigler,K. McWilliams,P.
Chem. Eng. Data 7, No. 2, 179-82 (Apr 1962) 2 fig 1 tab 81 ref
A3 B1 C6 D1 E3 F6 G1
*hydrogen, *gaseous, *liquid, *thermal conductivity, *viscosity,

13497 Transient temperature variations in pressure fluids due to changes in pressure
Andreatch,P.Jr. Thurston,R.N.
Chem. Eng. Data 7, No. 2, 243-45 (Apr 1962) 5 fig 3 tab 6 ref
A6 B1 C2 D1 E1 F6 G1
*pressurization, *helium, water, *gaseous, *compressibility

13536 Dielectric constant of liquid helium
Maxwell,E. Chase,C.E. Millett,W.E.
Low Temp. Phys. & Chem. Proc. 5th Intern. Conf., Madison, Wis. 1957, 53-56 (1958) 4 fig 5 ref
A3 B1 C5 D3 E1 F6 G2
*helium, *liquid, *dielectric constant, temperature effect, *expansivity, thermal expansion

13537 The significant structure theory of liquid hydrogen in its various ortho-para and isotopic forms
Henderson,D.J.
Utah Univ., Salt Lake City, Ph.D. Thesis (1961) 64 pp 15 fig 9 tab 54 ref (Univ. Microfilm Inc., Ann Arbor, Mich. Order No. 61-6226, xerox $4.55)
A3 B1 C6 D1 E3 F9 G7
*hydrogen, *parahydrogen, normal hydrogen, *deuterium, orthodeuterium, *hydrogen deuteride, *liquid, *triple point, *density, *vapor pressure, theory, *entropy, *specific heat, calculation, *critical constants, *surface tension, *PVT data,

13544 Low temperature vapor-liquid equilibrium in light hydrocarbon mixtures: methane-ethane-propane system
Price,A.R.
Rice Inst., Houston, Tex. Ph. D. Thesis (1957) 193 pp 41 fig 16 tab 79 ref
A3 B1 C7 D1 E1 F9 G7
*methane, *ethane, *propane, *gaseous mixture, *liquid mixture, *phase equilibrium, vapor-liquid equilibrium, *equation of state, equilibrium ratio, *ternary system, *binary system,

13546 Preliminary measurements concerning the dielectric constant of liquid hydrogen and liquid oxygen and its dependence on temperature as regards the latter substance
Breit,G. Onnes,H.K.
Verslag Gewone Vergader. Afdel. Natuurk. Koninkl. Ned. Akad. Wetenschap. 33, 705-08 (1924) Trans. in Commun. Phys. Lab. Univ. Leiden, No. 171a, 3-6, 2 tab 5 ref
A3 B1 C6 D1 E1 F7 G1
*hydrogen, *liquid, *dielectric constant, *density, *PVT data, *oxygen, temperature effect, pressure effect

13548 Supplement to the bibliography of technical notes and technical reports
European Off. Aerospace Res., Brussels, Belg. (Jan 1962) 90 pp
ASTIA AD 272 347 A1 B1 C D E F5 G6
*bibliography, reports

13558 The specific heats and compressibilities of liquid normal and para hydrogen
Van Itterbeek,A. Van Dael,W.
Physica 27, No. 12, 1202-06 (Dec 1961) 3 fig 4 tab 14 ref
MF No. 157-D A3 B1 C6 D1 E1 F6 G1
*hydrogen, normal hydrogen, *para hydrogen, *liquid, *density, *velocity of sound, *specific heat, *compressibility, *expansivity, thermal expansion

13610 Impact compressibility of liquid nitrogen and solid carbon dioxide
Zubarev,V.N. Telegin,G.S.
Akad. Nauk S.S.S.R. Doklady 142, 309-12 (1962) 2 fig 3 tab 11 ref
MF No. 158-C A3 B7 C7 D1 E1 F7 G1
*nitrogen, *liquid, *compressibility, *carbon dioxide,

13611 An additive function of entropy of boiling, and the prediction of latent heat of vaporisation and vapour pressure of liquids
Thomas,L.H.
J. Chem. Soc. 161, 2132-52 (1959) 9 tab 23 ref
CA 53, 14622 A3 B1 C1 D1 E3 F7 G1
*ethane, *hydrocarbon, paraffin class, propylene, calculation, *boiling temperature, *vapor pressure, *heat of vaporization

13613 Corresponding states theory for argon and xenon
Danon,F. Pitzer,K.S.
J. Phys. Chem. 66, 583-85 (1962) 2 fig 1 tab 18 ref
A3 B1 C7 D1 E3 F6 G1
*argon, *rare gas, xenon, *gaseous, *solidified gas, *PVT data, compressibility factor, *equation of state, second virial coefficient, *melting curve, *reduced variable, law of corresponding states

13623 The coefficient of volume absorption of second sound and the viscosity of the normal component of helium II down to 0.83 degree K.
Zinov'eva,K.N.
Zhur. Eksptl. i Teoret. Fiz. 31, 31-36 (1956) 5 fig 1 tab 14 ref
MF No. 160-X A3 B7 C4 D3 E1 F7 G1 S6
helium II, *helium, *viscosity, *density, *liquid, sound

13624 Viscosity of liquid helium -3 in the range 0.35-3.2 degrees K and helium-4 above the lambda point
Zinov'eva,K.N.
Soviet Phys. JETP 7, No. 3, 421-25 (Sept 1958) 5 fig 2 tab 15 ref
MF No. 160-O A3 B1 C4 D1 E1 F6 G1
*helium, *liquid, helium 3, *viscosity, helium 4

13625 Helium temperatures from vapor pressure measurements
Hoare,F.E. Zimmerman,J.E.
Rev. Sci. Instr. 30, No. 3, 184-86 (Mar 1959) 3 fig 4 ref
MF No. 160-P A3 B1 C5 D1 E1 F6 G1
*helium, *vapor pressure, *liquid, *thermometry, *temperature

13626 Temperature dependence of the normal density of helium II
Andronikashvilii,E.L.
Zhur. Eksptl' i Teoret. Fiz. 18, 424-28 (1949) 1 fig 1 tab 5 ref
MF No. 160-Q A3 B7 C5 D1 E1 F7 G1
*helium, helium I, *liquid, *density, temperature effect

13628 The viscosity of liquid helium at frequencies of 11.8 and 35.5 kc/sec
Eisele,K.M. Hallett,A.C.H.
Can. J. Phys. 36, 25-34 (1958) 4 fig 10 ref
MF No. 160-F A3 B1 C4 D3 E1 F7 G1
*helium, *liquid, *viscosity, helium I, helium II, frequency

13632 Velocity of sound in liquid helium
Van Itterbeek,A.
Nuovo cimento Suppl. 9, No. 1, 291-96 (1958) 5 fig 3 tab 9 ref
MF No. 160-H A3 B1 C4 D1 E1 F7 G1
*helium, *liquid, *velocity of sound, sound absorption, *gaseous

13633 The thermal conductivity of condensed helium
Wilks,J.
Nuovo cimento Suppl. 9, No. 1, 84-94 (1958) 10 fig 30 ref
MF No. 160-G A3 B1 C4 D3 E1 F7 G1
*helium, *liquid, *thermal conductivity, helium 4, *solidified gas, *gaseous, helium 3, *argon, *viscosity

13636 Thermal conductivity of liquid helium II in very narrow channels
Atkins,K.R.
Phys. Rev. 108, No. 4, 911-13 (Nov 1957) 1 fig 3 ref
MF No. 160-B A3 B1 C4 D3 E3 F6 G1
*helium, helium II, *liquid, *viscosity, *thermal conductivity

13639 The heat conductivity and viscosity of liquid helium II
Brewer,D.F. Edwards,D.O.
Proc. Roy. Soc. (London) A251, 247-64 (Jun 1959) 9 fig 27 ref
MF No. 159-V A3 B1 C5 D3 E1 F6 G1
*thermal conductivity, *viscosity, *helium, helium II, *liquid, *density

13641 The surface tension of liquid He3 in the region of very low temperatures (1.0-0.35 degrees K)
Zinov'eva,K.N.
Soviet Phys. JETP 2, No. 4, 774-75 (Jul 1956) 2 fig 7 ref
MF No. 160-R A3 B1 C4 D3 E1 F6 G1
*helium, helium 3, *surface tension, helium 4, reduced variable,

13642 Surface tension of liquid He4 and liquid He3
Trikha,S.K. Rastgi,O.P.
Progr. Theoret. Phys. (Kyoto) 15, 296-98 (1956) 2 fig 2 tab 11 ref
MF No. 160-T A3 B1 C5 D3 E3 F7 G1
*helium, *liquid, helium 3, helium 4, *surface tension, zero-point energy, heat of vaporization, vapor pressure

13643 Measurement of the product of viscosity and density of liquid helium with a torsional crystal
Kelber,B. Quirby,S.L.
Phys. Rev. 107, No. 3, 645-46 (Aug 1957) 2 fig 5 ref
MF No. 159-Y A3 B1 C5 D3 E1 F6 G1
*helium, *liquid, *viscosity, *density, helium I, helium II

13645 Die warmeleitfahigkeit von gasformigen para-ortho-wasserstoffgemischen bei 20 degrees K. The thermal conductivity of gaseous ortho-para hydrogen mixtures at 20 degrees K
Heinzinger,K. Klemm,A. Waldmann,L.
Z. Naturforsch. 16a, No. 12, 1338-42 (Dec 1961) 3 fig 1 tab 10 ref
MF No. 156-G A3 B3 C6 D E1 F7 G1
*para hydrogen, *ortho-parahydrogen, *thermal conductivity,

13646 Viscosity measurements in liquid helium II
Benson,C.B. Hollis Hallett,A.C.
Can. J. Phys. 38, 1376-89 (1960) 1 fig 6 tab 24 ref
MF No. 157-S A3 B1 C5 D1 E1 F7 G1
*helium, helium II, *liquid, superfluid, *viscosity, *density,

13647 Viscosity and thermal conductivity of binary gas mixtures: krypton-argon, krypton-neon, and krypton-helium
Thornton,E.
Proc. Phys. Soc. (London) 77, Pt. 6, No. 498, 1166-69 (Jun 1961) 2 fig 1 tab 17 ref
MF No. 156-J A3 B1 C8 D1 E1 F6 G1
*gaseous mixture, *rare gas, krypton, *argon, *binary system, *thermal conductivity, *viscosity, concentration effect, *neon, *helium

13676 Liquid, gas, and dense fluid viscosity of ethane
Eakin,B.E. Starling,K.E. Dolan,J.P. Ellington,R.T.
Chem. Eng. Data 7, No. 1, 33-36 (Jan 1962) 6 fig 1 tab 23 ref
A3 B1 C2 D1 E1 F6 G1
*ethane, *liquid, *gaseous, *viscosity, temperature effect,

13678 Compression isotherms of argon, krypton, and xenon through the freezing zone.
Lahr,P.H. Eversole,W.G.
Chem. Eng. Data 7, No. 1, 42-47 (Jan 1962) 9 fig 6 tab 6 ref
A3 B1 C7 D1 E1 F6 G1
*argon, *rare gas, xenon, krypton, *melting curve, melting point, *compressibility, entropy, enthalpy, pressure effect,

13679 Velocity of sound in compressed gases
Sherwood,T.K.
Chem. Eng. Data 7, No. 1, 47-50 (Jan 1962) 1 fig 3 tab 14 ref
A3 B1 C8 D1 E3 F6 G1
*velocity of sound, high pressure, *gaseous, *helium, *carbon dioxide, *hydrocarbon, equation, calculation, *methane, *ethane, *ethylene, *reduced variable

13680 Critical temperatures and critical pressures of hydrocarbon mixtures. Methane-ethane-n-butane system
Cota,H.M. Thodos,G.
Chem. Eng. Data 7, No. 1, 62-65 (Jan 1962) 6 fig 2 tab 9 ref
A3 B1 C2 D1 E1 F6 G1
*gaseous mixture, *liquid mixture, *ternary system, *ethane, *methane, *butane, *critical constants, *critical region, critical temperature, critical pressure, *phase equilibrium, *phase diagram

13681 Thermodynamic properties of perfluorocyclobutane
Martin,J.J.
Chem. Eng. Data 7, No. 1, 68-72 (Jan 1962) 7 tab 14 ref
A3 B1 C8 D1 E1 F6 G1
*refrigerant, freon, *liquid, *gaseous, *vapor pressure, *PVT data, *equation of state, *density, saturated liquid, *critical constants *specific heat

13696 The specific heat of saturated liquid para-hydrogen from 15 to 32 degrees K
Younglove,B.A. Diller,D.E.
Cryogenics 2, No. 5, 283-87 (Sept 1962) 5 fig 5 tab 16 ref
A3 B1 C6 D1 E1 F7 G1
*parahydrogen, *liquid, saturated liquid, *specific heat, equation, temperature effect, *argon, *solidified gas

13702 The thermal conductivity of solid nitrogen
Roder,H.M.
Cryogenics 2, No. 5, 302-04 (Sept 1962) 1 fig 1 tab 10 ref
A3 B1 C5 D1 E1 F7 G1
*nitrogen, *solidified gas, *thermal conductivity, temperature

13703 The thermodynamic properties of helium from 6 to 540 degrees R between 10 and 1500 PSIA
Mann,D.B.
Natl. Bur. Standards Tech. Note No. 154A (Jan 1962) 89 pp 1 fig 3 tab 16 ref
A3 B1 C5 D1 E3 F3 G6
*helium, *liquid, *gaseous, saturated vapor, saturated liquid, *density, *PVT data, *enthalpy, *entropy, *internal energy,

13704 The vapour pressure of 20 degrees K equilibrium hydrogen
Weber,L.A. Diller,D.E. Roder,H.M. Goodwin,R.D.
Cryogenics 2, No. 4, 236-8 (1962) 1 fig 3 tab 9 ref
A3 B1 C6 D1 E1 F7 G1
*hydrogen, *parahydrogen, *liquid, saturated liquid, *vapor pressure, equation

13735 Melting curves of helium and hydrogen isotopes
Lamb,G.
Proc. Phys. Soc. (London) B70, 156-? (1957) 1 fig 7 ref
MF No. 159-K A3 B1 C5 D3 E2 F6 G1
*hydrogen, *deuterium, *tritium, *helium, helium 3, helium 4, *solidified gas, *melting curve, *internal energy

13737 New measurement of the Joule-Thomson effect of hydrogen
Koeppe,W. Eder,F.X.
Exper. Tech. Physik 4, 26-8 (1956) 5 fig 6 ref
MF No. 159-G A3 B3 C6 D3 E1 F7 G1
*hydrogen, *gaseous, *joule-thomson coefficient, temperature effect, pressure effect, *entropy, T-S diagram, *internal energy

13739 Different lattice constants of solid neon isotopes
Kogan,V.S. Lazarev,B.G. Bulatova,R.F.
Soviet Phys. JETP 13, 19-20 (1961) 1 fig 1 tab 8 ref
MF No. 159-D A3 B1 C5 D1 E1 F6 G1
*neon, *solidified gas, *density, *isotope, lattice parameter

13743 Crystalline structure of hydrogen and deuterium
Kogan,V.S. Lazarev,B.G. Bulatova,R.F.
Soviet Phys. JETP 4, 593-4 (1957) 3 ref
MF No. 158-X A3 B1 C5 D2 E1 F6 G1
*hydrogen, *deuterium, *solidified gas, crystal structure, *density

13759 On the Joule-Thomson effect and the molar heat content of deuterium and helium
Bahr,H.D.
Z. Electrochem. 60, 515-17 (1956) 6 fig 1 tab 6 ref
MF No. 159-L A3 B3 C5 D3 E1 F7 G1
*deuterium, *helium, *joule-thomson coefficient, *gaseous, *specific heat, pressure effect

13761 Isotherms of neon at temperatures between 0 degrees C and 150 degrees C and at densities up to 1100 amagat (Pressures up to 2900 atmospheres)
Michels,A. Wassenaar,T. Louverse,P.
Physica 26, 539-43 (1960) 5 tab 1 ref
MF No. 152-H A3 B1 C8 D1 E1 F6 G1
*neon, *gaseous, *PVT data, isotherm, equation, *density, pressure

13770 Chemical reactions using modulated free radical beams. The vapor pressure of solid hydrogen in the temperature range from 4.7 degrees K to 11.1 degree K
Harrison,H. Fite,W.L. Guthrie,G.L.
General Dynamics Corp., General Atomic Div., San Diego, Calif. Final Rept. No. AFOSR-2357 (Feb 1962) Contr. No. AF 49(638)-301, GA-2972, Proj. No. 30, 61 pp 11 fig 2 tab 35 ref
ASTIA AD 277 010 A3 B1 C5 D1 E1 F5 G5
*hydrogen, normal, *solidified gas, *vapor pressure, equation,

13778 The melting parameters of nitrogen and argon under pressure, and the nature of the melting curve
Bridgman,P.W.
Phys. Rev. 46, 930-33 (1934) 2 tab 6 ref
A3 B1 C7 D1 E1 F6 G1
*nitrogen, *argon, *solidified gas, *liquid, *melting curve, *heat of fusion, pressure effect, temperature effect

13779 On the measurement of very low temperatures. XXVI. Vapour pressures of hydrogen in the neighbourhood of the boiling point and between the boiling point and the critical temperature
Cath,P.G. Onnes,H.K.
Versleg Gewone Vergader. Afdel. Natuurk. Koninkl. Ned. Akad. Wetenschap. 26, 437-44 (Jun 1917) and 26, 490-93 (Sept 1917) Trans. in Communs. Phys. Lab. Univ. Leiden, No. 152a (1918) 17 pp 4 fig 3 tab 6 ref
A3 B1 C6 D1 E1 F7 G1
*hydrogen, *liquid, *vapor pressure, boiling point-to-critical point, temperature effect, triple point-to-critical point, *boiling temperature

13780 The compressibility of hydrogen to high pressures
Bridgman,P.W.
Rec. trav. chim. 42, 569-71 (1923) 1 tab 6 ref
A3 B1 C2 D1 E1 F7 G1
*hydrogen, *gaseous, *compressibility, pressure effect, high

13781 Compressibilite des gaz, oxygene, hydrogene, azote et air jusqu a 3000 atm. Compressibility of the gases, oxygen, hydrogen, argon and air up to 3000 atmospheres
Amagat,E.H.
Compt. rend. 107, 522-24 (1888)
A3 B2 C8 D1 E1 F7 G1
*hydrogen, *nitrogen, *oxygen, *air, *gaseous, *compressibility, pressure effect, high pressure, *density

13782 Uber die dichte des flussigen wasserstoffs, den brechungsexponenten und die dispersion des flussigen wasserstoffs und des flussigen stickstoffs. About the density of liquid hydrogen, the refractive index and the dispersion of liquid hydrogen and liquid nitrogen.
Augustin,Herbert
Ann. Physik 46, 412-45 (1915) 5 fig 31 ref
A3 B3 C6 D1 E1 F7 G1 [illegible]
*hydrogen, *liquid, *density, *nitrogen, *optical property,

13783 Uber siedenden sauerstoff. About boiling oxygen
Bestelmeyer,A.
Ann. Physik 14, 87-98 (1904) 1 fig 4 tab 5 ref
A3 B3 C7 D1 E1 F7 G1
*oxygen, *liquid, *vapor pressure, *boiling temperature, saturated liquid

13800 Densites des phases coexistantes du methane et de l'oxyde de carbone. The densities of coexistant phases of methane and carbon monoxide.
Cardoso,Ettore
Arch. sci. phys. et nat. 39, 403-04 (1915) 2 ref
MF No. 164-J A3 B2 C7 D1 E1 F7 G1
*carbon monoxide, *methane, *density, *critical constants,

13802 Generalized thermodynamic excess functions for gases and liquids.
Hirschfelder,J.O. Buehler,R.J. McGee,H.A.Jr. Sutton,J.R.
Ind. Eng. Chem. 50, 386-90 (Mar 1958) 6 fig 1 tab 2 ref
A3 B1 C8 D3 E3 F6 G1
*nitrogen, *gaseous, *reduced variable, law of corresponding states, *entropy, *enthalpy, *free energy, excess free energy,

13803 The entropy of vaporization as a means of distinguishing normal liquids.
Hildebrand,J.H.
J. Am. Chem. Soc. 37, 970-78 (1915) 1 fig 2 tab 28 ref
A3 B1 C7 D1 E3 F6 G1
*nitrogen, *oxygen, *liquid, *heat of vaporization, entropy,

13808 Multiphase and volumetric equilibria of methane-n-hexane binary system at temperatures between -100 degrees and 150 degrees C.
Shim,J. Kohn,J.P.
Chem. Eng. Data 7, No. 1, 3-8 (Jan 1962) 8 fig 2 tab 20 ref
A3 B1 C8 D1 E1 F6 G1
*methane, *hydrocarbon, paraffin class, *binary system, *gaseous mixture, *liquid mixture, *density, fugacity, solid

13820 Isothermals of monatomic substances and their binary mixtures. XV. The vapour pressure of solid and liquid argon, from the critical point down to -206 degrees.
Crommelin,C.A.
Communs. Phys. Lab. Leiden, No. 136c, 23-32 (1913) 5 tab 19 ref
A3 B1 C7 D1 E1 F7 G1
*argon, *liquid, *solidified gas, *heat of vaporization, *vapor pressure, *phase equilibrium, liquid-vapor equilibrium, solid-vapor equilibrium, *critical constant, critical pressure,

13822 The vapour pressure curve of liquid helium below the lambda point.
Bleaney,B. Simon,F.
Trans. Faraday Soc. 35, 1205-14 (1939) 4 fig 2 tab 18 ref
CA 33, 9070 A3 B1 C5 D1 E2 F7 G1
*helium, *liquid, *vapor pressure, equation, saturated liquid, temperature effect, *specific heat, *heat of vaporization

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Bauer,E. Magat,M. Surdin,M.
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CA 31, 2888 A3 B1 C1 D3 E2 F7 G1
*reduced variable, *liquid, molecular volume, *argon, *neon, *carbon dioxide, *oxygen, xenon, *carbon monoxide, oxide of nitrogen, *hydrogen, water, sulfur dioxide, *ammonia, *compressibility, *organic fluid, *surface tension, *specific heat, *air, mercury, bromine, *viscosity

13831 The link between the dielectric strengt of gases and liquids and their physiochemical properties.
Vorob'yev,A.A. Kalganov,A.F.
Izv. Tomsk. Ordena Trudovogo Krasnogo Politekhn. Inst. 91, 103-107 (1956) (Trans. by Foreign Tech. Div. AF Systems Comm. Wright-Patterson AFB, Ohio, Trans. No. FTD-TT-62-170-1/2/4, Apr 1962, 9 pp 3 fig 1 tab 13 ref)
ASTIA AD 281 163 A3 B1 C6 D1 E1 F5 G6
*carbon dioxide, dielectric strength, *hydrogen, *oxygen, *nitrogen, *halogen, chlorine, bromine, iodine, dielectric breakdown, *specific heat, *boiling temperature, melting temperature, *heat of fusion, *heat of vaporization, *electrical property, *inorganic fluid, hydrogen chloride, halide,

13832 Establishing proven design criteria for cryogenic boost tanks.
Spieth,C.W.
Beechcraft Res. and Develop. Inc., Boulder, Colo. Eng. Rept. No. 7300 (Dec 1959) Contr. No. AF 33(616)-5154, Suppl. S3 (59-207) Proj. No. 3084, Task No. 30304, FTRDI MR59-2, 395 pp 129 fig 9 tab 34 ref

13843 Uber dampfdruckmessungen an reinem argon. About vapor pressure measurements in pure argon.
Born,Fritz
Ann. Physik 69, 473-504 (1922) 10 fig 10 tab 28 ref
A3 B3 C7 D1 E1 F7 G1
*argon, *liquid, *solidified gas, *vapor pressure, equation, *heat of fusion, *specific heat

13844 Vapour pressure of isotopic solids by a steady flow method: Argon between 72 degrees K and triple point.
Boato,G. Scoles,G. Vallauri,M.E.
Nuovo cimento 23, 1041-53 (Mar 1962) 4 fig 1 tab 14 ref
A3 B1 C7 D1 E1 F7 G1
*argon, *solidified gas, *isotope, *vapor pressure, *triple point

13845 The impact compressibility of liquid nitrogen and solid carbon dioxide.
Zubarev,V.N. Telegin,G.S.
Soviet Phys. "Doklady" 7, No. 1, 34-36 (Jul 1962) 2 fig 3 tab 11 ref
A3 B1 C7 D1 E1 F6 G1
*nitrogen, *liquid, *compressibility, pressure effect, very high pressure, *carbon dioxide, *solidified gas

13846 Temperature dependence of the surface tension of He I.
Singh,A.D.
Phys. Rev. 125, No. 3, 802 (Feb 1962) 1 fig 4 ref
A3 B1 C4 D3 E3 F6 G1
*helium, helium II, *liquid, *surface tension, temperature

13848 Ueber die sublimationswarme der kohlensaure und die verdampfungswarme der luft. About the heat of sublimation of carbon dioxide and the heat of vaporization of air.
Bohn,U.
Ann. Physik 1, 270-4 (1900) 2 fig 3 ref
A3 B3 C7 D1 E1 F7 G1
*carbon dioxide, *solidified gas, *heat of sublimation, *air, *liquid, *heat of vaporization

13849 Uber kalorimetrische messungen an flussigem sauerstoff und flussigem stickstoff. About calorimetric measurements in liquid oxygen and liquid nitrogen.
Alt,H.
Ann. Physik 13, 1010-27 (1904) 2 fig 4 tab 6 ref
A3 B3 C7 D1 E1 F7 G1
*oxygen, *nitrogen, *liquid, *heat of vaporization, pressure

13882 Density of the normal component in solutions of helium isotopes.
Berezniak,N.G. Eselson,B.N.
Soviet Phys. JETP 4, No. 1, 766-67 (Feb 1957) 2 fig 9 ref
MF No. 163-Y A3 B1 C5 D3 E1 F6 G1
*helium, helium 4, helium 3-helium 4, *liquid, *liquid mixture, *density, helium II, temperature effect

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Gosney,W.B.
Bull. IIR Annexe 1961-3, 521-36 (Presented at Meeting of Comm. 2, 3, 6b & 8, Cambridge, Sept 20-22, 1961) 4 fig 5 tab 22 ref
A3 B1 C7 D1 E2 F7 G2
*refrigerant, freon 11, freon 12, freon 22, freon 13, freon 113, freon 114, freon 14, freon 21, *boiling temperature, *critical constant, *melting curve, melting temperature, *chemical property, *propane, freon, *ethane, *ethylene, *hydrocarbon,

13889 Velocity of sound in liquid oxygen and liquid nitrogen as a function of temperature and pressure.
Van Itterbeek,A. Van Dael,W.
Physica 28, No. 9, 861-70 (Sept 1962) 5 fig 6 tab 5 ref
A3 B1 C7 D1 E1 F6 G1
*oxygen, *nitrogen, *liquid, saturated liquid, *velocity of sound, temperature effect, pressure effect, equation

13903 Properties of helium 3 and 4.
Beenakker,J.
LOW-TEMPERATURE PHYSICS, 263-305 Gordon and Breach Sci. Publishers, New York (1962) 33 fig 25 ref
A3 B1 C4 D1 E2 F6 G2
*helium, helium 3, helium 4, *liquid, *vapor pressure, *internal energy, *atomic-molecular property, *boiling temperature, *specific heat, pressure effect, temperature effect, superfluid,

13911 The specific heat at low temperatures. IV. Measurements of the specific heat of liquid hydrogen. Preliminary results on the specific heat of solid hydrogen and on the heat of fusion of hydrogen.
Keesom,W.H. Onnes,H.K.
Proc. Acad. Sci. Amsterdam 20, 1000-04 (1918) 2 fig 2 tab 2 ref, Communs. Phys. Lab. Univ. Leiden, No. 153a (1916)
MF No. 164-V A3 B1 C6 D1 E1 F7 G1
*hydrogen, *liquid, *solidified gas, *specific heat, atomic heat, *heat of fusion, temperature effect

13912 Isothermen van eenatomige stoffen en hunne binaire mengsels. XVI. Hernieuwde bepaling van de dampspanningen van vast argon tot - 205 degrees. Isotherms for monatomic solids and for their binary mixtures. XVI. New determinations of vapor pressure of solid argon to - 205 degrees.
Crommelin,C.A.
Verslag Gewone Vergader. Afdel. Natuurk. Koninkl. Ned. Akad. Wetenschap. 22, 1212-15 (1914) 3 tab, Communs. Phys. Lab. Univ. Leiden, No. 140a
MF No. 164-T A3 B4 C7 D7 E1 F7 G1
*argon, *solidified gas, *vapor pressure, equation, *heat of sublimation, calculation

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Onnes,H.K. Martinez,P.
Anales Real Soc. Espan. Fis. Quim. (Madrid) 20, 233-42 (1922) 4 fig 1 tab 9 ref
MF No. 164-Q A3 B8 C6 D1 E1 F7 G1
*hydrogen, *liquid, *vapor pressure, saturated liquid, equation,

13925 Theoretical performance of hydrogen-oxygen rocket thrust chambers.
Sievers,G.K. Tomazic,W.A. Kinney,G.R.
Natl. Aeronaut. Space Admin. Tech. Rept. R-111 (1961) 73 pp 1 fig 1 tab 5 ref
NASA N62 70535 A3 B1 C6 D1 E2 F3 G6
*oxygen, *hydrogen, *liquid, *density, melting temperature, *boiling temperature, *heat of vaporization, *heat of fusion, *physical property, specific impulse, *rocket engine, calculation, theoretical performance

13924 Isothermen van twee-atomige stoffen en hunne binaire mengsels. XVI. Dampspanningen van stikstof tusschen het kritische punt en het kookpunt. Isotherms for diatomic gases and for their binary mixtures. XVI. Vapor pressure for nitrogen between critical and boiling temperatures.
Crommelin,C.A.
Verslag Gewone Vergader. Afdel. Natuurk. Koninkl. Ned. Akad. Wetenschap. 23, 991-94 (1915) 1 tab 18 ref, & Communs. Phys. Lab. Univ. Leiden, No. 145d
MF No. 164-S A3 B4 C7 D1 E1 F7 G1
*nitrogen, *liquid, *vapor pressure, boiling-to-critical point,

13925 SUPERCONDUCTIVE DEVICES.
Brenner,J.W.
McGraw-Hill Book Co. Inc., New York (1962) 184 pp
A7 B1 C5 D1 E2 F6 G2
*superconducting device, cryotron, computer, *electronic equipment, *aluminum, *brass, *tin, *lead, *niobium, *stainless steel, *copper, *electrical conductivity, *thermal conductivity, *specific heat, *thermal expansion, *tensile property, *alloy, inconel, *tantalum, *glass, pyrex, *quartz, *teflon, *helium, *liquid, *vapor pressure

13958 Thermo properties of hydrocarbons. Part 2: Thermodynamic properties of methane.
Canjar,L.N. Tejada,V.M. Manning,F.S.
Petrol. Refiner 41, No. 9, 253-56 (Sept 1962) 1 fig 36 ref
A3 B1 C8 D3 E2 F6 G1
*methane, *liquid, *gaseous, *enthalpy, pressure effect, *critical constant

13978 The heat of vaporization of hydrogen.
Keesom,W.H.
Communs. Phys. Lab. Univ. Leiden, No. 137e, 47-52 (Apr 1911) 4 ref
A3 B1 C6 D1 E1 F7 G1
*hydrogen, *oxygen, *liquid, *heat of vaporization, pressure

13980 Diffusion coefficient in solid argon and thermoconductivity of solid argon.
Boato,Giovanni
Genoa Univ., Italy, Final Tech. Rept. (Mar 1962) Contr. No. DA 91-591-EUC-1721, 12 pp 11 ref
A3 B1 C7 D1 E1 F5 G5
*argon, *solidified gas, *thermal conductivity, *transport

13982 Second virial coefficients of argon, krypton, and argon-krypton mixtures at low temperatures.
Fender,B.E.F. Halsey,G.D.Jr.
J. Chem. Phys. 36, No. 7, 1881-88 (Apr 1962) 4 fig 5 tab 27 ref
A3 B1 C7 D1 E1 F6 G1
*argon, *rare gas, krypton, *gaseous, *gaseous mixture, *equation of state, second virial coefficients, diffusion coefficient,

13983 Van der Waals' forces and the vapor pressures of ortho-and parahydrogen and ortho-and paradeuterium.
Cohen,K. Urey,H.C.
J. Chem. Phys. 7, 157-63 (1939) 2 fig 12 ref
A3 B1 C6 D3 E3 F6 G1
*orthohydrogen, *parahydrogen, *paradeuterium, *hydrogen, *deuterium, orthodeuterium, *liquid, *vapor pressure, van der waals, theory, equation, *atomic-molecular property

14014 The fluidity of binary mixtures.
Boon,J.P. Thomaes,G.
Physica 28, No. 10, 1074-76 (Oct 1962) 2 fig 2 tab 5 ref
A3 B1 C7 D1 E1 F6 G1
*rare gas, krypton, *argon, *liquid mixture, *binary system, *viscosity

14019 Thermo properties of hydrocarbons. Part 3: Thermodynamic properties of ethane.
Canjar,L.N. Tejada,V.M. Manning,F.S.
Petrol. Refiner 41, No. 10, 149-52 (Oct 1962) 24 ref
A3 B1 C8 D3 E3 F6 G1
*ethane, *liquid, *gaseous, *enthalpy, pressure effect, calculation, pressure-enthalpy chart

14023 A tabulation of the thermodynamic properties of normal hydrogen from low temperatures to 540 degrees R and from 10 to 1500 PSIA, Supplement A (British units).
Dean,J.W.
Natl. Bur. Standards Tech. Note No. 120A (Jun 1962) 75 pp 1 fig 6 ref
A3 B1 C6-D1-E3 F5 G6
*hydrogen, *liquid, *density, *enthalpy, *entropy, *internal energy, *gaseous, saturated liquid

14072 An investigation of the properties of quartz crystals at liquid helium and liquid nitrogen temperatures.
Newell,D.E.
Iowa State Univ., Iowa City, Ph. D. Thesis (1958) 122 pp 48 fig 6 tab 22 ref (Univ. Microfilm, Inc., Ann Arbor, Mich. Order No. 58-2976)
A2 B1 C5 D1 E1 F9 G7
*quartz, *electrical conductivity, temperature coefficient of electrical resistivity, equation, work hardening, *helium, *nitrogen, *liquid, saturated liquid, *boiling temperature, *vapor pressure, *oxygen, *nitrogen, *liquid mixture, *binary

14073 An examination of the 1948 liquid helium vapor pressure-temperature scale.
Clement,J.R. Logan,J.K. Gaffney,J.
Naval Res. Lab., Washington, D.C. Rept. No. NRL 4542 (May 1955) 22 pp 6 fig 10 ref
ASTIA AD 62 277 A7 B1 C4 D1 E2 F5 G6
*helium, *liquid, *vapor pressure, *thermometry, *gas thermometry, *calibration, *resistance thermometry, temperature scale

14077 Second transition in solid CH4.
Colwell,J.H. Gill,E.K. Morrison,J.A.
J. Chem. Phys. 36, 2223-4 (1962) 1 fig 11 ref
MF No. 165-Y A3 B1 C5 D3 E1 F6 G1
*methane, *solidified gas, *specific heat, *phase transition

14111 Marine transportation of cryogenic liquids.
Corlett,C.E.B.
Bull. IR Annexe 1961-3, 537-55 (Presented at Meeting of Comm. 2, 3, 6b & 8, Cambridge, Sept 20-22, 1961) 5 fig 6 tab 4 ref
A3 B1 C7 D1 E2 F7 G2
*methane, *ethane, *propane, *butane, *liquid, *gaseous, melting temperature, *boiling temperature, *density, *heat of vaporization, *chemical property, *alloy, aluminum alloy, magnesium,

14127 The thermodynamic properties of nitrogen from 114 to 540 degrees R between 1.0 and 3000 PSIA. Suplement A (British units).
Strobridge,T.R.
Natl. Bur. Standards Tech. Note No. 129A (Feb 1963) 85 p 2 fig 2 tab 20 ref
A3 B1 C7 D1 E2 F3 G6
*nitrogen, *gaseous, *liquid, *internal energy, *enthalpy, *entropy, *density, *vapor pressure, saturated liquid, *equation of state, *specific heat, second virial coefficient

14129 The specific heat at constant volume of para-hydrogen at temperatures from 15 to 90 degrees K and pressures to 340 atm.
Younglove,B.A. Diller,D.E.
Cryogenics 2, No. 6, 348-52 (Dec 1962) 4 fig 2 tab 8 ref
A3 B1 C6 D1 E1 F7 G1
*parahydrogen, *specific heat, *density, *PVT data, *gaseous,

14130 Melting pressure equation for the hydrogens.
Goodwin,R.D.
Cryogenics 2, No. 6, 353-55 (Dec 1962) 2 fig 3 tab 9 ref
A3 B1 C6 D1 E3 F7 G1
*hydrogen, *parahydrogen, *deuterium, *tritium, *melting curve, *triple point, *solid, *liquid, equation, pressure effect

14142 Calculation of thermodynamic properties of real gases at high temperatures.
Tubachnikov,A.G.
Inzhener. Fiz. Zhur. 5, No. 9, 25-32 (Sept 1962) (Abstr. in Current Rev. Soviet Tech. Press No. 60-21441-128, 1(811) Oct 1962)
A3 B7 C8 D1 E3 F7 G1
*nitrogen, *gaseous, *equation of state, virial coefficient,

14198 Velocity of sound in a He3-He4 mixture.
Guptill,E.W. Hallett,A.C.H. Lim,C.C.
Nuovo cimento Suppl. 9, No. 1, 341 (1958)
MF No. 163-T A3 B1 C5 D2 E1 F7 G1
*argon, *solidified gas, *velocity of sound, *helium, *liquid, helium3-helium4 mixture, *liquid mixture, *velocity of sound

14207 Thermodynamics of the phase transition He I - He II in solutions of helium isotopes.
Eselson,B.N. Kaganov,M.I. Lifshits,I.M.
Zhur. Eksptl' i Teoret. Fiz. 33, 936-44 (1957) 6 fig 15 ref
MF No. 163-K A3 B7 C5 D3 E3 F7 G1
helium 3, helium 4, *helium, *vapor pressure, *phase transition property, helium3-helium4, *liquid mixture, *phase equilibrium,

14229 Isotherms of monatomic gases and of their binary mixtures. IV. Remarks on the preparation of argon. V. Vapour pressures above -140 degrees C, critical temperature and critical pressure of argon.
Crommelin,C.A.
Koninkl. Ned. Akad. Wetenschap. Proc. 13, 54-65 (1910) 1 fig 3 tab 47 ref Reprinted from Communs. Phys. Lab. Univ. Leiden, No. 115
MF No. 167-M A3 B1 C7 D1 E1 F7 G1
*argon, *liquid, saturated liquid, *vapor pressure, temperature

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Koeppe,W.
Monatsber. Deut. Akad. Wiss. Berlin 2, 78-86 (1960) 5 fig 7 ref
MF No. 167-B A3 B3 C6 D3 E3 F7 G1
*helium, helium 4, *hydrogen, *deuterium, *nitrogen, *argon, *oxygen, *methane, *carbon dioxide, *gaseous, *joule-thomson

14248 The establishment of a practical scale of temperature for the range 10-90 degrees K.
Barber,C.R.
Brit. J. Appl. Phys. 13, 235-41 (1962) 4 tab 3 fig 20 ref
MF No. 165-A A2 B1 C6 D3 E2 F7 G1
*copper, *thermal expansion, temperature effect, *oxygen, *boiling temperature, *helium, *gaseous, second virial coefficient, *thermometry, temperature scale, gas thermometer,

14249 Equilibrium properties of the carbon dioxide plus propylene and carbon dioxide plus cyclopropane systems at low temperatures.
Haselden,G.G. Snowden,P.
Trans. Faraday Soc. 58, Pt. 8, No.476, 1515-28 (Aug 1962) 10 fig 10 tab 10 ref (Title in U. K. At. Energy Authority List of Publ. No. 83, 7, Oct 1962)
MF No. 166-D A3 B1 C7 D1 E1 F7 G1
*carbon dioxide, *hydrocarbon, propylene, *liquid mixture, *gaseous mixture, *binary system, *phase equilibrium, liquid-vapor equilibrium, bubble point, dew point, *enthalpy, *free energy, *density, solid-liquid equilibrium, PTX data, *propane, *liquid, *vapor pressure

14251 Thermodynamic functions of the gaseous dioxides of carbon, nitrogen, sulfur, and chlorine, and of carbon disulfide and oxysulfide.
Gordon,J.S.
J. Chem. Eng. Data 6, No. 3, 390-94 (Jul 1961) 7 tab 26 ref
MF No. 166-P A3 B1 C8 D1 E3 F6 G1
*carbon dioxide, *inorganic fluid, carbon disulfide, oxide of nitrogen, sulfur dioxide, carbon oxysulfide, oxide, chlorine, *gaseous, *entropy, *enthalpy, *free energy, *specific heat

14272 NMR measurements of self-diffusion in normal hydrogen gas from 55 degrees to 90 degrees K.
Lipsicas,M.
J. Chem. Phys. 36, 1235 (1962) 2 fig 11 ref
MF No. 165-H A3 B1 C7 D1 E1 F6 G1
*hydrogen, *gaseous, *transport property, diffusion coefficient, *viscosity, temperature effect

14274 Tables of the thermodynamic properties of nitrogen from 100 to 1500 degrees K.
Little,W.J. Neel,C.A.
Arnold Eng. Develop. Center, Tenn. Tech. Doc. Rept. No. AEDC-TDR-62-170 (Sept 1962) Contr. No. AF 40(600)-1000, 97 pp 2 tab 4 ref
ASTIA AD 283 441 A3 B1 C7 D1 E3 F5 G5
*nitrogen, *gaseous, *PVT data, compressibilitiy factor, *internal energy, *enthalpy, *entropy, *density, pressure

14325 Cryogenic fluids - their properties and technology.
Vance,R.W. Reynales,C.H.
APPLIED CRYOGENIC ENGINEERING, 16-43, John Wiley & Sons, Inc., N.Y. (1962) 4 fig 6 tab 43 ref
A3 B1 C7 D1 E2 F6 G2
*oxygen, solubility, *carbon dioxide, *liquid, compatibility, polymer, *helium, *gaseous, impurity, water, *velocity of sound, *air

14329 Helium liquefaction - cryogenic equipment applications.
Westbrock,A.J.
APPLIED CRYOGENIC ENGINEERING, 192-211, John Wiley & Sons, Inc., N.Y. (1962) 8 fig 1 tab 5 ref
A6 B1 C1 D1 E2 F6 G2
*vapor pressure, *carbon dioxide, *oxygen, *nitrogen, *neon, *hydrogen, *liquid, saturated liquid

14331 Safety aspects of cryogenic systems.
McKinley,C.
APPLIED CRYOGENIC ENGINEERING, 255-92, John Wiley & Sons, Inc., N.Y. (1962) 17 fig 6 tab 26 ref
A6 B1 C7 D1 E2 F6 G2
*solution, solubility, *oxygen, *propane, *methane, *ethane, *butane, *ethylene, *organic fluid, *hydrocarbon, olefin class, paraffin class, concentration effect, *density, *solid, *acetylene, *ammonia, *carbon dioxide, *hydrogen, enhancement, *vapor pressure, *nitrogen, *argon, *water, *liquid, *gaseous, *mechanical property,

14349 Prandtl number, thermal conductivity, and viscosity of air-helium mixtures.
Eckert,E.R.G. Irvine,T.F.
Natl. Aeronaut. Space Admin. Tech. Note No. D-533 (Sept 1960) 39 pp
NASA N62 71107 A3 B1 C8 D1 E1 F3 G6 G0
*gaseous mixture, *air, *helium, *thermal conductivity, *viscosity, prandtl number, *binary system, *transport property

14394 Helium.
Arp,V. Kropschot,R.H.
APPLIED CRYOGENIC ENGINEERING, R.W.Vance & W.M.Duke, Edts. 321-43, John Wiley & Sons, Inc., New York (1962) 17 fig 2 tab 55 ref
A3 B1 C4 D3 E2 F6 G2
*helium, *vapor pressure, *entropy, TS diagram, *internal energy, pressure-internal energy diagram, *velocity of sound, *heat of vaporization, *specific heat, *viscosity, *density, *liquid, *gaseous, helium 3-helium 4, *helium, helium 3,

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Houser,C.G.
Nebraska Univ., Lincoln, Masters Thesis (1960)
A3 B1 C8 D E1 F9 G7
*methane, *liquid mixture, *ethane, *enthalpy, saturated liquid

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Paddock,C.F.
Newark Coll. of Eng., N.J. Masters Thesis (1960)
A3 B1 C8 D E1 F9 G7
*nitrogen, *gaseous mixture, *butane, *enthalpy

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Christman,R.G.
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A3 B1 C8 D E F9 G7
*carbon dioxide, *equation of state

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Jordan,R.D.
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A3 B1 C5 D E F9 G7
*helium, *velocity of sound, *liquid, *solidified gas

14418 Thermal conductivity of gases in relation to gas composition.
Daynes,H.A.
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A3 B1 C8 D1 E2 F7 G2
*argon, *helium, *neon, *oxygen, *nitrogen, *hydrogen, *carbon monoxide, *carbon dioxide, *inorganic fluid, carbon disulfide, hydrogen sulfide, oxide of nitrogen, *gaseous, *thermal conductivity, *gaseous mixture, *binary system, *methane, *ethane, *ethylene, *hydrocarbon, *acetylene, *refrigerant, methyl chloride, *air, *organic fluid, *carbon dioxide

14422 The thermal conductivities of liquid normal and of liquid para hydrogen from 15 degrees to 27 degrees K.
Powers,R.W. Mattox,R.W. Johnston,H.L.
Ohio State Univ., Cryogenic Lab. Columbus, Tech. Rept. No. TR 264-10 (n.d.) Contr. No. W33-038-ac-14794(16243) (1956) 10 pp 2 fig 1 tab 3 ref
ASTIA ATI 105 927 A3 B1 C6 D1 E1 F5 G5
*hydrogen, *parahydrogen, *liquid, *thermal conductivity,

14423 Technical data on liquid nitrogen.
Linde Air Products Co.
Linde Air Products Co., New York, Rept. No. F-1018 (1957) 20 pp 7 fig 2 tab 7 ref
A3 B1 C7 D3 E2 F8 G5 57
*nitrogen, *liquid, *gaseous, saturated liquid, saturated vapor, *thermal conductivity, *viscosity, *thermodynamic property, mollier diagram, superheated, *PVT data, *enthalpy, *phase diagram;

14428 Insulation properties of fluorocarbon expanded rigid urethane foam.
Knox,R.E.
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A2 B1 C8 D1 E1 F8 G9
*plastic, urethane, *insulation, foam, *thermal conductivity, *polymer, *refrigerant, freon 11, freon 12, freon 13, freon 22, freon 114, boiling point, *gaseous, *heat of vaporization

14443 The properties of nitrogen up to 15,000 degrees K.
Maecker,H.
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NASA N62 14521 A3 B1 C2 D3 E1 F3 G5
*nitrogen, *gaseous, *electrical conductivity, *thermal conductivity

14480 Thermal conductivity leak detectors suitable for testing equipment by overpressure or vacuum.
Steckelmacher,W. Tinsley,D.M.
Vacuum 12, 153-59 (1962) 6 fig 3 tab 12 ref
A7 B1 C2 D1 E1 F7 G1
*vacuum equipment, leak detector, *thermal conductivity, *viscosity, *acetylene, *air, *ammonia, *argon, *carbon dioxide, *gaseous, *carbon monoxide, *ethane, *ethylene, freon 12, *helium, *refrigerant, *methane, methyl chloride, *oxygen, *nitrogen, oxide of nitrogen, sulfur dioxide, *hydrogen,

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Zeigler,R.K. McWilliams,P.C. Keller,W.E.
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NASA N62 16823 A3 B1 C6 D1 E3 F3 G5
*hydrogen, *equation of state, *gaseous, *liquid, *PVT data,

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Woods,A,D.B. Hollis Hallett,A.C.
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A3 B1 C4 D1 E1 F6 G1
*helium, helium II, *liquid, *viscosity, temperature effect

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Robertson,J.H.
J. Sci. Instr. 37, 41-44 (Feb 1960) 5 fig 7 ref
MF No. 166-M A7 B1 C6 D3 E1 F6 G1
*specific heat, *nitrogen, *hydrogen, *gaseous, *copper

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Kohn,J.P.
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MF No. 166-I A3 B1 C8 D1 E1 F6 G1
*gaseous mixture, *liquid mixture, *binary system, *methane, *hydrocarbon, heptane, *phase equilibrium, *density, fugacity,

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Turlington,B.L. McKetta,J.J.
Am. Inst. Chem. Engrs. J. 7, No. 2, 336-37 (1961) 2 fig 2 tab 22 ref
MF No. 166-I A3 B1 C8 D1 E1 F6 G1
*carbon dioxide, *inorganic fluid, oxide of nitrogen, *gaseous, *PVT data, compressibility factor, *equation of state, second virial coefficient, pressure effect, temperature effect

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Mueller,W.H. Leland,T.W.Jr. Kobayashi,R.
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MF No. 166-I A3 B1 C8 D1 E1 F6 G1
*methane, *gaseous, *PVT data, compressibility factor, second virial coefficient, *equation of state, temperature effect, *gaseous mixture, *hydrogen, *binary system, concentration

14539 Extreme pressures. II. Volume-temperature relationship for gases.
Levitt,L.S.
J. Chem. Phys. 34, No. 4, 1440-43 (Apr 1961) 3 fig 3 tab 7 ref
MF No. 166-O A3 B1 C8 D3 E2 F6 G1
*water, water vapor, *nitrogen, *argon, *gaseous, *PVT data,

14540 An equation for the liquid and vapor states of nitrogen.
Bukacek,R.F. Peck,R.E.
Am. Inst. Chem. Engrs. J. 7, No. 3, 453-55 (Sept 1961) 6 fig 1 tab 20 ref
MF No. 166-I A3 B1 C7 D1 E3 F6 G1
*nitrogen, *liquid, *gaseous, *equation of state, *density

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Busch,J.S. Canjar,L.N.
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MF No. 166-I A3 B1 C8 D1 E2 F6 G1
*gaseous mixture, *binary system, *PVT Data, compressibility factor, equation, calculation, *methane, *ethane, PT-X data, *hydrocarbon, propylene, *argon, *ethylene, *oxygen, *ethylene,

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De Smedt,J. Keesom,W.H.
Communs. Phys. Lab. Leiden No. 178b, 19-21 (1925) 1 tab 5 ref
A3 B1 C6 D1 E1 F7 G1
*argon, *solidified gas, *density, crystal structure, lattice

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Bernardes,N.
Phys. Rev. 120, No. 6, 1927-32 (Dec 1960) (Abstr. Phys. Abstr. 64, No. 757, Jan 1961)
A3 B1 C4 D E3 F6 G1
*helium, helium 3, helium 4, *solidified gas, *compressibility, *velocity of sound, debye constant, gruneisen parameter,

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Von Siemens,H.
Ann. Physik 42, 871-88 (1913) 2 fig 16 tab 23 ref
A3 B3 C7 D1 E1 F7 G1
*inorganic fluid, carbon disulfide, *carbon dioxide, *nitrogen, *liquid, *solidified gas, *heat of vaporization, *vapor pressure, temperature effect, *oxygen, *liquid, boiling

14620 Die Bestimmung des Warmeinhaltes einiger kondensierter Gase. Determination of heat content of some condensed gases.
Eucken,A. Karwat,E.
Z. Physik. Chem. 112, 467-85 (1925) 16 tab 22 ref
A3 B3 C6 D1 E1 F8 G1
*inorganic fluid, hydrogen chloride, hydrogen bromide, halide, hydrogen, oxide of nitrogen, *phase transition property, *liquid, *solidified gas, *specific heat, *heat of fusion, melting temperature, solid-solid transition, *halogen, chlorine, *ammonia, *methane

14621 Quantum theory of condensed permanent gases II. The solid state and the melting line.
De Boer,J. Blaisse,B.S.
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A3 B1 C5 D1 E3 F6 G1 48
*krypton, *argon, *nitrogen, *neon, *hydrogen, *helium, *solidified gas, *equation of state, *melting curve,

14622 Transport properties and thermodynamics of gas mixtures.
Bell,D.A.
Iowa State Univ., Ames, Masters Thesis (1960) 64 pp 8 fig 4 tab 54 ref
A3 B1 C8 D3 E3 F9 G7
*hydrogen, *methane, *gaseous mixture, *binary system, *carbon dioxide, *viscosity, *equation of state, calculation, *hydrogen, *refrigerant, freon 12, *nitrogen, *ethane, *oxygen, *helium, *thermal conductivity, calculation, *neon

14624 Vapor-liquid equilibrium constants: Their prediction for binary systems up to the critical point.
Mehre,V.S.
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A3 B1 C2 D1 E3 F9 G7
*binary system, *gaseous mixture, *liquid mixture, *phase equilibrium, vapor-liquid equilibrium, equation, calculation, *ethane, *butane, *hydrocarbon, heptane, *critical region, *reduced variable, *vapor pressure

14625 The virial coefficients of hydrogen.
Piser,Roseann
Brooklyn College, New York, Masters Thesis (1960) 108 pp 32 fig 19 tab 25 ref
A3 B1 C7 D1 E3 F9 G7
*hydrogen, *equation of state, virial coefficient, second virial coefficient, third virial coefficient, *gaseous, calculation

14674 The thermal conductivity of carbon dioxide in the critical region. I. Measurements and conclusions.
Michels,A. Sengers,J.V. Van Der Gulik,P.S.
Physica 28, 1216-37 (Dec 1962) 7 fig 17 tab 20 ref
A3 B1 C8 D1 E1 F6 G1
*thermal conductivity, *carbon dioxide, *critical region, pressure effect, temperature effect, *density, *gaseous, *specific heat

14675 The thermal conductivity of carbon dioxide in the critical region. III. Verification of the absence of convection.
Michels,A. Sengers,J.V.
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A3 B1 C8 D1 E1 F6 G1
*carbon dioxide, prandtl number, *gaseous, *critical region, *thermal conductivity, temperature effect, pressure effect.

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Bachler,W. Klipping,G. Mascher,W.
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A6 B1 C5 D3 E1 F6 G2
*cryopumping, hydrogen, nitrogen, condensation coefficient, pumping speed, *solidified gas, *vapor pressure

14691 Find compressibility of gaseous carbon dioxide.
Tans,A.M.P.
Petrol. Refiner 41, No. 12, 119 (Dec 1962) 2 ref
A3 B1 C8 D3 E2 F6 G1
nomogram, *gaseous, *carbon dioxide, compressibility factor

14705 On the theory of classical fluids II.
Verlet,L. Levesque,D.
Physica 28, 1124-42 (Nov 1962) 8 fig 3 tab 19 ref
A4 B1 C7 D1 E3 F6 G1
*argon, *internal energy, *entropy, *critical constant, gas-liquid equilibrium, *phase equilibrium, isotherm, theory, *liquid, *gaseous

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A3 B1 C7 D1 E1 F6 G1
*liquid mixture, *methane, *argon, *heat of mixing, *density,

14718 On the reduced Frost-Kalkwarf vapor pressure equation.
Miller,D.G.
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A3 B1 C1 D1 E2 F6 G1
*vapor pressure, equation, *liquid, *ammonia, *carbon monoxide, *hydrogen, *nitrogen, *helium, *neon, *argon, krypton, xenon,

14729 Further measurements on the heat conductivity of liquid helium II.
Keesom,W.H. Saris,B.F.
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A3 B1 C5 D1 E1 F6 G1
*helium, *liquid, saturated liquid, helium II, *thermal conductivity, temperature effect

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*helium, *liquid, helium I, *thermal conductivity, temperature

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Ganz,E.
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*helium, *liquid, helium II, *thermal conductivity

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A3 B3 C8 D1 E1 F7 G1
*liquid, *thermal conductivity, *organic fluid, benzene, toluene, ethyl benzene, xylene, carbon tetrachloride, organic halide, alcohol, ether, acetone, amine, *reduced variable, *nitrogen, *oxygen, *methane

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*helium, *solidified gas, debye constant, *isotope, *oxide, alumina, *quartz, *carbon, diamond, *silicon, *germanium, *inorganic solid, bromide, chloride, potassium, *thermal conductivity, debye constant

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Grassman,P.
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*helium, helium I, *liquid, *thermal conductivity

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A3 B1 C5 D1 E3 F6 G1
*helium, helium II, *liquid, *thermal conductivity, temperature

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A3 B1 C7 D1 E3 F6 G1
*argon, *rare gas, krypton, xenon, *oxygen, *neon, *helium, *hydrogen, *nitrogen, *gaseous, intermolecular force, *equation of state, second virial coefficient, calculation, *carbon monoxide, *carbon dioxide, *methane, *ethylene, *ethane.

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*helium, helium I, *liquid, *thermal conductivity, temperature

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A3 B1 C7 D1 E1 F7 G1
*methane, *viscosity, *liquid, *gaseous, pressure effect

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Mathias,E. Crommelin,C.A. Onnes,H.K.
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A3 B2 C6 D1 E3 F7 G1
*hydrogen, *nitrogen, *argon, *oxygen, *rare gas, xenon, *gaseous, *density, law of rectilinear diameters, *critical constant, compressibility factor, calculation, *liquid,

14795 Optical determination of the compressibility of solid argon.
Smith,B.L. Pings,C.J.
J. Chem. Phys. 38, No. 4, 825-27 (Feb 1963) 2 fig 1 tab 23 ref
A3 B1 C7 D1 E1 F6 G1
*argon, *solidified gas, *compressibility, *expansivity,

14796 The rectilinear diameter of nitrogen.
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2 fig 1 tab 17 ref
A3 B1 C7 D1 E1 F7 G1
*nitrogen, *gaseous, *liquid, saturated vapor, saturated liquid, *density, law of rectilinear diameter, *critical constant

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Onnes,H.K. Weber,S.
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*helium, *liquid, *vapor pressure, saturated liquid, equation

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Onnes,H.K.
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A3 B1 C5 D1 E1 F7 G1
*helium, *liquid, *vapor pressure, *gaseous, *critical constant

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A3 B1 C6 D1 E1 F7 G1
*hydrogen, *liquid, *vapor pressure, *triple point, *boiling temperature, equation, *heat of vaporization

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A3 B1 C6 D1 E1 F7 G1
*hydrogen, *liquid, *gaseous, *solidified gas, *density, *triple point, *boiling temperature, temperature effect, thermal expansion

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Barsness,D.A.
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*organic fluid, *electrical property, *viscosity, *vapor pressure, *refrigerant

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Huth,F.
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A3 B1 C6 D3 E1 F7 G1
*neon, *liquid, *viscosity, boiling to critical point

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*inorganic fluid, hydrogen tritide, tritide, deuterium, *tritium, *liquid, *vapor pressure, *hydrogen deuteride, *deuterium

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*deuterium, *liquid, *solidified gas, *vapor pressure, *hydrogen

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A3 B1 C6 D1 E1 F6 G1
*deuterium, *liquid, *solidified gas, *vapor pressure, *triple point, *chemical potential, fugacity, *boiling temperature, *heat of vaporization, *heat of sublimation, *heat of fusion

14957 The vapor pressure of mixtures of light and heavy hydrogen.
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A3 B1 C6 D3 E1 F6 G1
*hydrogen, *deuterium, *liquid mixture, *vapor pressure,

14958 The vapor presssure of solid and liquid heavy hydrogen.
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*deuterium, *liquid, *solidified gas, *vapor pressure

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A3 B1 C6 D1 E1 F6 G1
*oxygen, *hdrogen, *liquid, *vapor pressure, *boiling temperature, temperature effect, *neon, *solidified gas, pressure coefficient, *gaseous, *helium, *hydrogen

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*oxygen, *solidified gas, *melting curve, pressure effect

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Benedict,Manson
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A3 B1 C7 D1 E1 F6 G1
*nitrogen, *gaseous, *PVT data, *density, high pressure, pressure effect, *equation of state, isotherm, isobar, inversion curve, *melting curve, *velocity of sound

14963 Pressure-volume isotherms of He4 below 4.2 degrees K.
Keller,W.E.
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A3 B1 C5 D1 E1 F6 G1
*helium, helium 4, *gaseous, *PVT data, isotherm, *liquid, *density, *equation of state, second virial coefficient,

14978 Viscosity measurements in liquefied gases.
Van Itterbeek,A. Zink,H. van Paemel,O.
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IR 11439 A3 B1 C6 D1 E1 F7 G1
*viscosity, *liquid, *oxygen, *nitrogen, *argon, *hydrogen,

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Simon,F. Ruhemann,M. Edwards,W.A.M.
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A3 B3 C6 D1 E1 F7 G1
*hydrogen, *neon, *nitrogen, *argon, *melting curve, pressure effect, temperature effect, equation, *density, *liquid,

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Scott,R.B.
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*oxygen, *liquid, *magnetic property, magnetic susceptibility, *heat of vaporization, *specific heat, *vapor pressure, *density, *viscosity, *velocity of sound, *compressibility, *thermal conductivity, mollier diagram, *dielectric constant, T-S diagram, *air, *hydrogen, *parahydrogen, *deuterium, *hydrogen deuteride, compressibility factor, *heat of fusion, *helium, *triple point, *boiling temperature, *critical constants, *nitrogen, *tensile property, *plastic, polyethylene, polyvinyl chloride, *nylon, mylar, *glass, borosilicate glass, *aluminum, *magnesium, *copper, *nickel, *manganese, *iron, ferrite, *chromium, *stainless steel, *monel, *teflon, pyrex, *gaseous, *solidified gas, *phase

15009 Distillation des melanges d'isotopes de l'hydrogene et applications. Fabrication industrielle de deuterium appauvri en tritium. Distillation of hydrogen isotope mixtures. Industrial manufacture of deuterium with low tritium content.
Coulon,A. Simonet,G.A. Stouls,L.
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A3 B2 C6 D1 E1 F7 G2
*hydrogen, *hydrogen deuteride, *deuterium, *tritium, *inorganic fluid, hydrogen tritide, tritide, *liquid, *vapor pressure

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A3 B1 C5 D1 E3 F7 G2
*helium, helium 3, helium 4, *gaseous, *equation of state,

15021 Measurements on the velocity of sound in fluids.
Van Itterbeek,A. Van Dael,W. Forrz,G.
Bull. IIR Annexe 1961-5, 167-77 (Presented at Meeting of Comm. 1, London, Sept 20-22, 1961) 8 fig 4 tab 4 ref
A3 B1 C7 D1 E1 F7 G2
*helium, *gaseous, *velocity of sound, pressure effect, *hydrogen, *parahydrogen, *argon, *nitrogen, *liquid, *velocity of sound, pressure effect

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Bull. IR Annexe 1961-5, 179-89 (Presented at Meeting of Comm. 1, London, Sept 20-22, 1961) 10 fig 6 ref
A3 B1 C7 D3 E1 F7 G2
*oxygen, *nitrogen, *argon, *liquid, *density, pressure effect, *hydrogen, *liquid, *gaseous, *compressibility

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Univ. of Amsterdam, Institute for Theoretical Physics, Ph. D. Thesis (1951) 91 pp 19 fig 26 tab 103 ref
A3 B4 C1 D1 E3 F9 G7
*reduced variable, law of corresponding states, intermolecular force, lennard-jones function, *helium, *neon, *argon, *rare gas, krypton, xenon, *hydrogen, *deuterium, *nitrogen, *carbon monoxide, *methane, *equation of state, *gaseous, second virial coefficient, third virial coefficient, *viscosity, joule-thomson coefficient, *oxygen, *critical constant, *triple point, *hydrogen deuteride, *deuterium, *tritium, *inorganic fluid,

15049 Physical properties of refrigerants: solvent action and effect on elastomers of freons.
Kato,K. Fuzino,Y.
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*refrigerant, freon, compatability, elastomer

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*helium, helium 3, helium 4, *liquid, *heat of vaporization,

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PA 63 16933 MF No. 189-H A3 B1 C5 D1 E1 F7 G1
*helium, helium 4, *liquid, *expansivity, saturated liquid, equation, *PVT data, isochore, lambda temperature, helium II, derivative, *specific heat

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von Elbe,G. Scott,H.T.Jr.
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A6 B1 C6 D1 E2 F8 G5
*safety, *hazard, *hydrogen, liquid, ignition, detonation, *vapor pressure, *density

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Grey,Jerry
Instr. Soc. Am 14th Ann. Conf., Chicago (Sept 21-25, 1959) Preprint No. 111-59, 8 p 8 fig 1 tab
A7 B1 C1 D E F8 G9
*viscosity, *liquid, *helium, *hydrogen, *nitrogen, *oxygen

15106 Tension de vapeur des carbures gazeux satures aux basses temperatures en presence de gel de silice. Vapor pressure of saturated hydrocarbon gases at low temperatures in the presence of silica gel.
Delaplace,Rene
Compt. rend. 204, 1940-41 (1937) 1 tab 2 ref
A3 B2 C7 D1 E1 F7 G1
*vapor pressure, *methane, *ethane, *propane, *butane,

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Goodwin,R.D. Diller,D.E. Roder,H.M. Weber,L.A.
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A3 B1 C6 D1 E1 F6 G1
*parahydrogen, *PVT data, *liquid, *gaseous, *density

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Mantel,Wilhelm
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A3 B3 C2 D3 E1 F8 G3
*gaseous, *thermal conductivity, *hydrogen, *nitrogen, *helium, *argon, heat of combustion

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A3 B1 C8 D1 E1 F6 G1
*refrigerant, *gaseous, freon 12, freon 14, freon 22, freon 11, freon 113, freon 114, *velocity of sound, *equation of state, *specific heat

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Koeppe,W.
PROGRESS IN REFRIGERATION SCIENCE AND TECHNOLOGY 1, 156-63 (Proc. of Xth Intern. Congr. of Refrig., Copenhagen, 1959) Pergamon Press (1960) 8 fig 7 ref
A3 B1 C1 D3 E3 F7 G2
inversion curve, *joule-thomson effect, *reduced variable, *helium, *hydrogen, *nitrogen, compressibility factor, xenon, *argon, law of corresponding states, *gaseous, *neon, krypton, *oxygen

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A3 B1 C7 D1 E1 F7 G2
*oxygen, *liquid, *density, pressure effect, boiling temperature

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Taylor,W.J.
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A4 B1 C5 D3 E3 F7 G2
*hydrogen, *solidified gas, *specific heat, anomaly, theory

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A3 B1 C8 D1 E1 F7 G2
*refrigerant, *thermal conductivity, freon 113, freon 11, *liquid, freon 21, freon 114, freon 12, freon 22, freon 13,

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A3 B1 C8 D2 E3 F7 G2
*reduced variable, law of corresponding states, *refrigerant, freon, *PVT data

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Whitney,W.M. Chase,C.E.
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PA 66 319 A3 B1 C4 D1 E1 F6 G1
*helium, *liquid, *velocity of sound, saturated liquid

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Schuch,A.F. Mills,R.L.
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*helium, helium 4, crystal structure, *solidified gas, solid-solid transition

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Guggenheim,E.A. McGlashan,M.L.
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A3 B1 C6 D1 E3 F6 G1
*argon, *solidified gas, *density, *entropy, *enthalpy, lattice parameter, *atomic-molecular property, intermolecular force,

15356 The second and third virial coefficients for assemblies of nonspherical molecules.
Castle,B.J.
Maryland Univ., College Park, Master Thesis (1956) 46 pp 5 fig 8 tab 34 ref
A3 B1 C8 D1 E3 F9 G7
*carbon dioxide, *inorganic fluid, oxide of nitrogen, *nitrogen, *carbon monoxide, *ethylene, *ethane, second virial coefficient, third virial coefficient, *gaseous, *equation of state

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Dawson,J.M.
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A3 B1 C8 D1 E1 F9 G7
*argon, *gaseous, *PVT data, *entropy, *internal energy, pressure effect, high pressure, *ethane, *equation of state, *density, *enthalpy, *free energy, specific heat

15358 Pressure-density-temperature relations of freezing liquid parahydrogen to 350 atmospheres.
Goodwin,R.D. Roder,H.M.
Cryogenics 3, 12-15 (Mar 1963) 3 fig 3 tab 9 ref
A B1 C D E F7 G1
*parahydrogen, *melting curve, equation, *liquid, saturated liquid, *density, isochore, *PVT data

15359 The orthobaric densities of parahydrogen, derived heats of vaporization, and critical constants.
Roder,H.M. Diller,D.E. Weber,L.A. Goodwin,R.D.
Cryogenics 3, 16-22 (Mar 1963) 4 fig 7 tab 13 ref
A B1 C D E F7 G1
*parahydrogen, *liquid, *gaseous, saturated liquid, saturated vapor, *PVT data, *density, *vapor pressure, *critical constants, *heat of vaporization, *critical region, triple point -to- critical point, *equation of state

15376 A relative determination of the viscosity of several gases by the oscillating disk method.
Kestin,J. Whitelaw,J.H.
Brown Univ., Providence, R.I. Rept. No. BRN-2-P (Sept 1962) Contr. No. Nonr 185825, 46 pp 21 ref
ASTIA AD 287 471 A3 B1 C2 D E1 F5 G5
*viscosity, *helium, *gaseous, *argon, *neon, *carbon dioxide, *nitrogen

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Stewart,J.W.
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A3 B1 C5 D1 E1 F8 G9
*helium, helium 3, helium 4, *solidified gas, *melting curve, *density, *compressibility, pressure effect, high pressure

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Brewer,D.F. Edwards,D.O.
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A3 B1 C5 D3 E1 F6 G2
*helium, helium II, *viscosity, *liquid, *thermal conductivity,

15416 Transport properties of helium II in fine channels.
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A3 B1 C5 D3 E1 F6 G2
*helium, helium II, *liquid, *viscosity

15419 The entropy diagram of fluid helium.
Hill,R.W. Lounasmaa,O.V.
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A3 B1 C5 D1 E1 F6 G2
*helium, *liquid, *gaseous, *specific heat, saturated liquid, saturated vapor, *entropy

15425 Average potential theory of solutions - experimental evidence.
Mathot,Victor
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A3 B1 C7 D1 E1 F6 G2
*liquid mixture, *binary system, *methane, *carbon monoxide, *density, excess property, concentration effect, *argon

15451 The effect of isotopes on heat conduction.
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LOW TEMPERATURE PHYSICS & CHEMISTRY, 382-84 (Proc. 5th Intern. Conf. Low Temp. Phys. & Chem. 1957) Univ. Wisconsin Press, Madison (1958) 1 fig 3 ref
A2 B1 C5 D3 E1 F6 G2
*oxide, alumina, *quartz, *inorganic solid, fluoride, sodium, lithium fluoride, *germanium, magnesium, *silicon, titanium dioxide, *thermal conductivity, *isotope, halide, cesium, chloride, potassium, *helium, *solidified gas

15481 Pressure effects in NMR studies of solid hydrogen.
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*hydrogen, *solidified gas, *compressibility, *magnetic property, temperature effect, normal hydrogen

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*gaseous, *liquid, *thermal conductivity, *acetylene, freon 22, *refrigerant, freon 11, freon 12, freon 13, freon 21, freon 113, freon 114, *viscosity, methyl chloride, *organic fluid, acetone, benzene, *ethane, *halogen, bromine, iodine, chloroform, ethanol, methanol, *butane, *ethylene, *hydrocarbon, paraffin class, heptane, pentane, *propane, ether, *inorganic fluid, boron trifluoride, hydrogen chloride, halide, hydrogen, hydrogen sulfide, sulfur dioxide, *argon, *fluorine, *methane, *nitrogen, *neon, *oxygen, krypton, xenon, *deuterium, oxide of nitrogen,

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Simon,F. Glatzel,G.
Z. Anorg. Chem. 178, 309-16 (1929) 3 fig 2 tab 5 ref
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*melting curve, *carbon dioxide, *organic fluid, benzene,

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*hydrogen, *parahydrogen, *liquid, *density, *vapor pressure, *surface tension, *viscosity, *thermal conductivity, *dielectric constant, *heat of vaporization, *specific heat, *enthalpy, compatibility, evaporation rate, *oxygen, *compressibility, adiabatic, *refractive index, specific heat ratio. *fluorine,

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Weiland,W.F.
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NASA N62 13832 A6 B1 C7 D E F3 G9
*hydrogen, *gaseous, *thermal conductivity, *viscosity, *specific heat, *fluid flow, *heat transfer, hydrogen, helium

15536 The pressure-volume-temperature relations of a nitrogen-ethane-ethylene mixture.
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*gaseous mixture, *ternary system, *nitrogen, *ethane, *ethylene, *PVT data

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*gaseous mixture, *ternary system, *nitrogen, *ethane, *ethylene, *PVT data

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MF No. 168-C A3 B1 C8 D1 E3 F6 G1
*methane, *ethane, *propane, *butane, *hydrocarbon, paraffin class, *specific heat, *gaseous, propylene, *thermal conductivity, *reduced variable, *ethylene, law of corresponding states, olefin class

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MF No. 168-F A3 B1 C8 D1 E1 F6 G1
*hydrogen, *neon, *gaseous mixture, *binary system, *transport property, diffusion coefficient, *thermal conductivity, *argon,

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A3 B1 C5 D1 E3 F6 G1 54
*carbon monoxide, *nitrogen, *solidified gas, *density, *phase transition property, solid-solid transition, crystal structure, *internal energy, theory, dipole moment, quadrupole moment, *reduced variable;

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*nitrogen, *carbon monoxide, *gaseous, *entropy, *internal energy, *specific heat, intermolecular force, lennard-jones

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*carbon monoxide, *nitrogen, *oxygen, *solidified gas, *phase transition property, solid-solid transition, theory

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A3 B1 C8 D1 E3 F9 G7
*carbon dioxide, *gaseous, *equation of state, virial coefficient, compilation, *PVT data, compressibility factor,

15645 Transport properties of carbon dioxide.
Kennedy,J.T.
Northwestern Univ., Evanston, Ill. Master Thesis (1959) 57 pp 14 fig 1 tab 103 ref
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*carbon dioxide, *gaseous, *liquid, *viscosity, *thermal conductivity, *transport property, *density, diffusion

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A3 B1 C2 D1 E1 F9 G7
*carbon dioxide, *helium, *gaseous mixture, *binary system, *joule-thomson coefficient, *nitrogen

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A3 B1 C8 D1 E3 F9 G7
*enthalpy, *gaseous, *reduced variable, correction, *carbon dioxide, *butane, isobutane, *methane, *ethane

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Schaefer,C.A.
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*halogen, bromine, chlorine, iodine, *inorganic fluid, hydrogen bromide, hydrogen chloride, hydrogen fluoride, oxide of nitrogen, *gaseous, *liquid, *thermal conductivity, reduced variable, law of corresponding states, *carbon monoxide, *fluorine, *hydrogen, *nitrogen, *oxygen, compilation

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A3 B1 C2 D1 E1 F9 G7
*methane, *gaseous, *PVT data, compressibility factor, *binary mixture, *nitrogen, *gaseous mixture

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*helium, *nitrogen, *neon, *argon, *gaseous, *viscosity, temperature effect, pressure effect, *density

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Richardson,A.C.B.
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*methane, *gaseous, *PVT data, compressibility factor, *density, isotherm, *equation of state, virial coefficient, second virial

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A3 B1 C6 D1 E1 F9 G7
*hydrogen, *ethylene, *solidified gas, *expansivity, thermal expansion, temperature effect

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*carbon dioxide, *methane, *gaseous mixture, *binary system, *gaseous, *enthalpy, calculation

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A3 B1 C5 D1 E1 F6 G1
*helium, *boiling temperature, *liquid

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Keesom,W.H. De Smedt,J. Mooy,H.H.
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*parahydrogen, *solidified gas, *density, crystal structure, spectroscopic data

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*gaseous mixture, *binary system, *hydrogen, *nitrogen, *PVT data

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*argon, *liquid, *viscosity, *thermal conductivity, *transport

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NASA N62 70706 A3 B1 C8 D1 E2 F3 G6
*specific heat, *enthalpy, *entropy, *oxygen, *gaseous, *ammonia, *nitrogen, *fluorine, *hydrogen, *carbon monoxide, *methane, *carbon dioxide, oxide of nitrogen, *inorganic

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ASTIA AD 286 847 A3 B1 C7 D1 E2 F5 G6
*argon, *helium, *carbon monoxide, *hydrogen, *oxygen, *ozone, *water, hydrogen peroxide, *gaseous, *entropy, *free energy, *specific heat, *enthalpy, equilibrium constant, *methane, *acetylene, *ethylene, *ethane, *propane, *carbon dioxide,

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*hydrogen, *water, *gaseous mixture, *binary system, *enthalpy,

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Waltemeyer,R.V.
Northwestern Univ., Evanston, Master Thesis (1958) 50 pp 10 fig 16 tab 52 ref
A3 B1 C7 D1 E2 F9 G7
*methane, *liquid, *vapor pressure, *density, saturated liquid, *gaseous, saturated vapor, *specific heat, *enthalpy, *entropy, *heat of vaporization, *triple point, *boiling temperature, *critical constant

15838 The viscosity of liquefied gases.
Boon,J.P. Thomaes,G.
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A3 B1 C7 D1 E1 F6 G1
*viscosity, *liquid, *argon, *oxygen, *methane, krypton, *rare

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A3 B1 C8 D E1 F6 G1
*ethane, *gaseous, *PVT data, isotherm, *thermodynamic

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Fishtine,S.H.
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A3 B1 C8 D1 E3 F6 G1
*ammonia, *refrigerant, freon 12, *ethane, *inorganic fluid, sulfur dioxide, *water, *gaseous, *liquid, *density, saturated liquid, saturated vapor, calculation, equation, *critical constant, *organic fluid, *halogen, *rare gas, xenon, radon,

15904 The fluidity of argon-methane and krypton-methane mixtures.
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A3 B1 C7 D1 E1 E6 G1
*binary system, *viscosity, *liquid mixture, *argon, *methane,

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A3 B1 C8 D1 E1 F6 G1
*argon, *gaseous, *thermal conductivity, *density, pressure effect, prandtl number, *specific heat, *viscosity, *transport

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Zucker,I.J.
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MF No. 168-Y A3 B1 C6 D3 E2 F6 G1
*argon, *solidified gas, *density, theory, *compressibility, *expansivity, *specific heat, temperature effect

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MF No. 168-H A3 B7 C6 D1 E2 F7 G1
*argon, *solidified gas, *density, *expansivity, thermal expansion, *equation of state

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A3 B1 C5 D1 E1 F8 G9
*helium, *liquid, saturated liquid, *velocity of sound,

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Dash,J.G. McCormick,W.D. Tough,J.T. Higgs,P.M.
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A3 B1 C5 D2 E1 F8 G9
*helium, helium II, *liquid, *viscosity

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A3 B1 C4 D2 E1 F8 G9
*helium, *solidified gas, helium 3, helium 4, *thermal conductivity

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A3 B1 C5 D1 E1 F8 G9
*helium, *density, *critical region, *liquid, saturated liquid, saturated vapor, *gaseous, *reduced variable, *expansivity,

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A3 B1 C5 D2 E1 F8 G9
*helium, helium I, *liquid, *density

15995 Eddy viscosity in liquid helium I.
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A3 B1 C5 D2 E1 F8 G9
*helium, helium II, *viscosity, *liquid

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Lindahl,B.C.
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A3 B1 C8 D1 E1 F9 G7
*thermal conductivity, *binary system, *gaseous mixture, *helium, *argon, *nitrogen, *hydrogen, *carbon dioxide, *neon,

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MF No. 171-U A3 B1 C7 D1 E1 F7 G1
*argon, *oxygen, *nitrogen, *liquid mixture, second virial coefficient, *binary system, *phase equilibrium, vapor pressure of mixtures, excess property, *vapor pressure, density, *thermochemistry, heat of mixing, free energy, *carbon monoxide, *vapor pressure

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Stock,A. Nielson,C.
Chem. Ber. 39, 2066-69 (1906) 1 fig 1 tab 6 ref
MF No. 171-W A7 B3 C D E F7 G1
*oxygen, *liquid, *vapor pressure

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Soviet Phys. JETP 8, No. 6, 943-46 (Jun 1959) 5 fig 3 ref
A3 B1 C5 D3 E1 F6 G1
*helium, *liquid, *density, lambda temperature

16075 The molecular aggregation of liquefied gases.
Hunter,M.A.
J. Phys. Chem. 10, 330-60 (1906) 5 fig 7 tab 19 ref
MF No. 172-J A3 B1 C7 D1 E1 F6 G1
*oxygen, *liquid, solution, *ethylene, *ethane, colligative property, *vapor pressure, oxide of nitrogen, acetylene, sulfur dioxide, *binary system, *methane, *solidified gas,

16076 On the measurement of temperature. Part III. On the vapour pressure of liquid hydrogen at temperatures below its boiling-point on the constant-volume hydrogen and helium scales.
Travers,M.W. Jaquerod,A.
Phil. Trans. Roy. Soc. London A200, 155-80 (1903) 7 fig
MF No. 171-V A3 B1 C6 D1 E1 F7 G1
*hydrogen, *liquid, saturated liquid, *boiling temperature, *vapor pressure

16077 On the measurement of temperature. Part II. On the vapour pressures of liquid oxygen at temperatures below its boiling-point on the constant-volume hydrogen and helium scales.
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MF No. 171-V A3 B1 C7 D1 E1 F7 G1
*oxygen, *liquid, saturated liquid, *vapor pressure, *boiling temperature

16093 The heat of vaporization of liquid air.
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Phys. Rev. 20, No. 2, 77-84 (1905) 4 fig 3 tab 4 ref
MF No. 172-K A3 B1 C7 D1 E1 F6 G1
*air, *heat of vaporization, *liquid, *liquid mixture, *binary system, *oxygen, *nitrogen, concentration effect

16094 Isotherms of monatomic substances and of their binary mixtures. XIII. The empirical reduced equation of state for argon.
Onnes,H.K. Crommelin,C.A.
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MF No. 171-M A3 B1 C7 D1 E3 F7 G1
*argon, *gaseous, *equation of state, isotherm, virial coefficient, second virial coefficient, third virial coefficient, *PVT data, *density, calculation, *density

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MF No. 171-L A3 B1 C7 D1 E1 F7 G1
*hydrogen, *gaseous, *density, *PVT DATA, compressibility factor,

16098 Isotherms of diatomic gases and their binary mixtures. VI.I Isotherms of hydrogen between -104 degrees C and -217 degrees C.
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MF No. 171-L A3 B1 C7 D1 E1 F7 G1
*hydrogen, *gaseous, *PVT data, *density, compressibility factor, *equation of state, virial coefficient, second virial coefficient,

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Commun. Phys. Lab. Univ. Leiden No. 166, 3-37 (1923) 10 fig 11 tab 30 ref Repr: Arch. neerl. sci. IIIA, 7, 172-206 (1923)
MF No. 171-N A3 B2 C6 D1 E1 F7 G1
*air, *gaseous, *density, *PVT data, compressibility factor, isochore, *hydrogen, *helium, pressure effect, temperature

16100 Bestimmung des Dampfdruckverhaltnisses 160160/180180 zwischen 63 degrees K und 74 degrees K. Determination of the vapor pressure ratio of the isotopes oxygen 16 to oxygen 18 between 63 degrees K and 74 degrees K.
Groth,W. Ihle,H. Murrenhoff,A.
Angew. Chem. 68, No. 20, 644-48 (1956) 4 fig 1 tab 12 ref
MF No. 172-I A3 B3 C7 D1 E1 F7 G1
*oxygen, *isotope, *liquid, *vapor pressure, temperature effect

16101 The heat of vaporization of nitrogen.
Shearer,J.S.
Phys. Rev. 17, 124 (1903)
MF No. 171-X A3 B1 C7 D1 E1 F6 G1
*nitrogen, *liquid, *heat of vaporization

16102 Melting temperatures of krypton, xenon, and methane at pressures up to 3000 atm.
Stryland,J.C. Crawford,J.E. Mastoor,M.A.
Can. J. Phys. 38, 1546-47 (1960) 2 tab 2 ref
MF No. 169-T A3 B1 C7 D1 E1 F7 G1
*rare gas, krypton, xenon, *methane, *solidified gas, *melting curve, high pressure

16104 The isometrics of gaseous methane.
Keyes,F.G. Burks,H.G.
J. Am. Chem. Soc. 49, 1403-10 (Jun 1927) 3 tab 7 ref
MF No. 172-G A3 B1 C8 D1 E1 F6 G1
*methane, *gaseous, *PVT data, isochore, *equation of state,

16105 Isotherms of monatomic substances and of their binary mixtures. XIV. Calculation of some thermal quantities for argon.
Onnes,H.K. Crommelin,C.A.
Commun. Phys. Lab. Univ. Leiden No. 131c, 21-29 (1913) 5 tab 7 ref
MF No. 171-M A3 B1 C8 D1 E3 F7 G1
*argon, *gaseous, *PVT data, calculation, isotherm

16106 Die Zusammendruckbarkeit des Wasserstoffes. The compressibility of hydrogen.
Wroblewski,S.v.
Sitzber. Akad. Wiss. Wien. Math. naturw. Kl. Abt. Ia 97, 1321-79 (1888) 4 fig 10 tab 47 ref
MF No. 171-O A3 B3 C8 D1 E1 F7 G1
*hydrogen, *gaseous, *PVT data, compressibility factor

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MF No. 171-J A3 B1 C8 D1 E1 F7 G1
*hydrogen, *gaseous, *PVT data, *density, compressibility factor, isotherm

16108 Dichte und Temperatur. VI. Density and temperature. VI.
Herz,W.
Z. Elektrochem. 33, 348-49 (1927) 5 tab 2 ref
MF No. 172-N A3 B3 C7 D1 E1 F7 G1
*argon, *organic fluid, ester, acid, *halogen, chlorine, *nitrogen, *liquid, *density, temperature effect

16109 Calculation of the vapor pressure and heats of vaporization and sublimation of liquids and solids, especially below one atmosphere. IV. Nitrogen and fluorine.
Ziegler,W.T. Mullins,J.C.
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A3 B1 C6 D1 E2 F8 G5
*nitrogen, *liquid, *solidified gas, *vapor pressure, *heat of vaporization, *heat of sublimation, calculation, *specific heat, *density, second virial coefficient, *phase transition property, solid-solid transition, *fluorine, *equation of state

16120 Ueber einige eigenschaften des flussigen stickstoffs. About some properties of liquid nitrogen.
Erdmann,H.
Ber. deut. chem. Ges. 39, 1207-11 (1906) 1 tab 10 ref
MF No. 171-W A3 B3 C8 D1 E2 F7 G1
*nitrogen, *oxygen, *gaseous, *expansivity, thermal expansion,

16123 Die Unstetigkeit im thermischen und kalorischen Verhalten des Methans bei 20.4 degrees abs. als Phasenumwandlung zweiter Ordnung. The change in the thermal behavior of methane at 20 degrees K for the second order phase transition.
Clusius,K. Perlick,A.
Z. physik. Chem. B24, 313-27 (1934) 6 fig 28 ref
A3 B3 C6 D1 E1 F7 G1
*methane, *solidified gas, *phase transition property, second order transition, *specific heat, *density, molecular volume

16124 Nature of the lambda transition in liquid helium.
Butler,S.T. Blatt,J.M. Schafroth,M.R.
Nuovo cimento 4, No. 3, 674-75 (Sept 1956) 1 fig 4 ref
A3 B1 C5 D3 E3 F7 G1
*helium, *liquid, lambda temperature, *specific heat

16125 The transition temperature in liquid helium.
Brush,S.G.
Proc. Roy. Soc. (London) A242, 544-57 (1957) 2 fig 3 tab 21 ref
A4 B1 C5 D1 E3 F6 G1
*helium, *liquid, *specific heat, lambda temperature

16142 Aircraft-fuel-tank design for liquid hydrogen.
Reynolds,T.W.
Natl. Advisory Comm. Aeronaut. Research Memo. No. RM E55F22 (Aug 1955) 27 pp 14 fig 26 ref
NASA N63 12535 A8 B1 C6 D1 E2 F3 G6
*parahydrogen, *specific heat, *liquid, *thermal expansion,

16152 Interrelation of thermal conductivity and viscosity of binary gas mixtures.
Saxena,S.C. Agrawal,J.P.
Proc. Phys. Soc. (London) 80, No. 1, 313-15 (1962) 1 tab 7 ref
MF No. 171-X A3 B1 C2 D1 E2 F6 G1
*binary system, *rare gas, *helium, xenon, krypton, *gaseous mixture, *viscosity, *thermal conductivity, *neon, diffusion coefficient, *argon

16156 Argon-oxygen-nitrogen three component system experimental vapor-liquid equilibrium data.
Israel,L. Sterner,C.J. Wilson,G.K.
Air Products and Chemicals, Inc., Res. Develop. Dept. Allentown, Pa. Quart. Progr. Rept. No. 1 (Oct 1962) Contr. No. AF 33 (657)-8742, 33 pp 9 fig 4 tab
A3 B1 C7 D1 E1 F8 G5
*oxygen, *nitrogen, *argon, *ternary system, *liquid mixture, *gaseous mixture, *phase equilibrium, *binary system, *chemical potential, *equation of state, second virial coefficient,

16163 Ortho-para hydrogen and deuterium conversion.
Sitney,L. Phillips,T.J. Vesselovsky,V.V.
Johnston,H.L.
Ohio State Univ. Cryogenic Lab., Columbus, Tech. Rept. (Apr 1952) Contr. No. W33-038-ac-17721, 73 pp 4 fig 34 tab 118 ref
ASTIA ATI 156 298 A6 B1 C6 D1 E2 F5 G5 52
*ortho-para conversion, hydrogen, deuterium, ortho-para

16200 Analyses of experimental thermal values and equation of state for hydrogen.
Rabinovich,V.A.
Inzhener. Fiz. Zhur. Akad. Nauk Belorus S.S.R. 5, No. 5, 30-37 (1962) 3 fig 2 tab 19 ref (Trans. by Foreign Technol. Div., AF Systems Command Wright-Patterson AFB, Ohio, Trans. No. FTD-TT-62-1569, Jan 1963)
NASA N64-22625 MF No. 219-0 A3 B1 C6 D1 E3 F7 G1 62
*hydrogen, *gaseous, *equation of state, *specific heat, *internal energy

16204 New formula for the pressure of the saturated vapor.
Putilov,K.A. Mel'nichenko,N.I.
Zhur. Fiz. Khim. 36, No. 7, 1611-12 (1962) 1 tab 5 ref
MF No. 169-X A3 B7 C8 D1 E3 F7 G1
*carbon dioxide, *liquid, saturated liquid, *vapor pressure,

16210 Constantes critiques de l'ethane, de l'anhydride carbonique et de l'anhydride sulfureux. Critical constants of ethane, carbon dioxide and sulfur dioxide.
Cardoso,E. Bell,R.
J. Chim. Phys. 10, 497-503 (1912) 9 ref
MF No. 172-L A3 B2 C2 D1 E1 F7 G1
*ethane, *carbon dioxide, *inorganic fluid, sulfur dioxide, *critical constant, *gaseous

16211 Contribution a l'etude du point critique. Contribution to the study of the critical point.
Cardoso,E.
J. Chim. Phys. 10, 470-97 (1912)
MF No. 172-L A3 B2 C2 D1 E2 F7 G1
*ethylene, *inorganic fluid, oxide of nitrogen, hydrogen sulfide, *ethane, *carbon dioxide, sulfur dioxide, *acetylene, *ammonia, hydrogen chloride, *organic fluid, cyanogen, *critical constants, *gaseous

16213 Formulation and digital coding of approximate hydrogen properties for application to heat-transfer and fluid-flow computations.
Harry,D.P.III.
Natl. Aeronaut. Space Admin. Tech. Note No. D-1664 (1963) 72 pp 7 fig 4 tab 17 ref
A3 B1 C6 D3 E3 F3 G6
*hydrogen, *equation of state, virial coefficient, *density, *specific heat, *enthalpy, *gaseous, *ortho para hydrogen,

16214 Thermodynamic properties of argon.
Flubacher,P. Leadbetter,A.J. Morrison,J.A.
Proc. Intern. Conf. Low Temp. Phys., 7th, Toronto, Canada, 1960, 695-97 (1961) 2 fig 9 ref
A3 B1 C5 D1 E1 F6 G2
*argon, debye constant, *solidified gas, *specific heat, *heat of vaporization, *heat of fusion, *vapor pressure

16217 Measurements of the thermal conductivity of liquid He3.
Fairbank,H.A. Lee,D.M.
Symposium on Solid and Liquid Helium 3, Proc., Ohio State Univ. Res. Foundation, Columbus (Aug 20-23, 1957) 26-31 (1957) Contr. No. AF 49(638)-225, AFOSR-TR-57-78, 3 fig 1 tab 11 ref
ASTIA AD 136 642 A3 B1 C4 D1 E1 F5 G2
*helium, helium 3, *liquid, helium 4, *thermal conductivity,

16218 Darstellung der fur die vorhergehende Arbeit gebrauchten Praparate und Daten zu ihrer Charakterisierung. Preparation of materials used in the previous article and data for their characterization.
Fischer,W. Klemm,W.
Z. Physik. Chem. 147A, 275-81 (1930) 1 tab 7 ref
MF No. 172-V A3 B3 C7 D1 E1 F7 G1
*methane, *ethane, *propane, *butane, *ethylene, *vapor pressure,

16219 Uber Temperaturmessung. II. Uber den Dampfdruck von flussigem Wasserstoff bei Temperaturen unterhalb seines Siedepunkts nach der Wasserstoff- und Heliumskala mit konstantem Volumen. Temperature measurement. II. The vapor pressure of liquid hydrogen at temperatures below its boiling point according to the hydrogen- and helium scale with constant volume.
Travers,M.W. Jaquerol,A.
Z. Physik. Chem. (Leipzig) 45, 435-60 (1903) 7 fig 9 tab 16 ref
MF No. 172-M A3 B3 C6 D1 E1 F7 G1
*hydrogen, *liquid, *vapor pressure, temperature effect, *neon, *solidified gas

16231 Die Molwarmen, Schmelz- und Umwandlungswarmen der kondensierten Gase CD4 und CH3D. The heat capacity, heat of fusion and heats of transition of the condensed gases CD4 and CH3D.
Clusius,K. Popp,L.
Z. physik. Chem. (Leipzig) B46, 63-81 (1940) 4 fig 3 tab 17 ref
A3 B3 C6 D1 E1 F7 G1
*methane, *deutero compound, deutero methane, melting temperature, *phase transition property, solid-solid transition, *specific heat, *solidified gas, *heat of fusion, temperature

16232 Uber den Dampfdruckunterschied und die Molwarme von Ortho- und Parawasserstoff. The vapor pressure difference and the molar heat capacity of ortho and para hydrogen.
Schafer,K.
Z. physik. Chem. (Leipzig) B42, 380-94 (1939) 1 fig 3 tab 6 ref
A3 B3 C6 D1 E3 F7 G1
*orthohydrogen, *parahydrogen, *liquid, *vapor pressure, *specific heat, *heat of sublimation, *deuterium, *paradeuterium,

16233 LIQUID HELIUM.
Atkins,K.R.
Cambridge Univ. Press (1959) 312 p
A3 B1 C5 D1 E2 F7 G2
*helium, *liquid, *phase diagram, lambda temperature, *specific heat, *heat of vaporization, helium 4, *density, *dielectric constant, *refractive index, *surface tension, *expansivity, thermal expansion, saturated liquid, *velocity of sound, second sound, *viscosity, *thermal conductivity, sound absorption, helium 3-helium 4, helium 3, *gaseous, saturated vapor, *entropy, *magnetic property, *melting curve

16231 Wird die Schmelzschärfe durch die Isotopie beeinflusst. Die Tripelpunktsdrucke der Gase CO, A, N2O, HCl und HBr. Is the sharpness of the melting point influenced by the isotopes. The triple point pressures of the gases CO, A, N2O, HCl and HBr.
Clusius,K.
Z. physik. Chem. (Leipzig) B49, 1-8 (1941) 1 fig 1 tab 5 ref
A3 B3 C7 D1 E1 F7 G1
*carbon monoxide, *argon, *inorganic fluid, oxide of nitrogen, hydrogen chloride, hydrogen bromide, *melting curve

16242 On the rectilinear diameter for argon.
Mathias,E. Onnes,H.K. Crommelin,C.A.
Commun. Phys. Lab. Univ. Leiden No. 131a, 3-14 (1912) 3 fig 1 tab 35 ref, Trans. from Verslag Gewone Vergader. Afdel. Natuurk. Koninkl. Ned. Akad. Wetenschap 20, 700-06, 893-98 (Oct-Nov 1912) Repr. in Koninkl. Ned. Akad. Wetenschap. Proc. 15, 667-73 (1912) and Ann. phys. 17, 442-55 (1922)
MF No. 175-A A3 B1 C7 D1 E1 F7 G1 12
*argon, *liquid, *gaseous, saturated liquid, saturated vapor, *density, law of rectilinear diameter, law of corresponding

16282 New determination of the normal boiling point of oxygen.
Keesom,W.H. Van Der Horst,H. Jansen,A.F.J.
Commun. Phys. Lab. Univ. Leiden No. 203b, 9-13 (1929) 1 tab 19 ref
MF No. 176-Y A3 B1 C7 D1 E1 F7 G1
*oxygen, *liquid, *vapor pressure, *boiling temperature

16283 Ueber die spezifische warme des flussigen heliums. Specific heat of liquid He.
Keesom,W.H. Clusius,K.
Commun. Kamerligh Onnes Lab. Univ. Leiden No. 219e, 42-58 (1932) 3 fig 4 tab 19 ref, Repr. from: Koninkl. Ned. Akad. Wetenschap. Proc. 35, 307 (1932)
MF No. 176-W A3 B3 C5 D1 E1 F7 G1 32
*helium, *liquid, saturated liquid, *specific heat,

16284 The melting-curve of hydrogen to 450 kg/cm2.
Keesom,W.H. Lisman,J.H.C.
Commun. Phys. Lab. Univ. Leiden No. 213c, 41-45 (1931) 1 fig 3 tab 8 ref, Repr. from Koninkl. Ned. Akad. Wetenschap. Proc. 34, 598 (1931)
MF No. 176-W A3 B1 C6 D1 E1 F7 G1
*hydrogen, *solidified gas, *melting curve, temperature effect

16285 The melting curve of neon to 200 kg/cm2.
Keesom,W.H. Lisman,J.H.C.
Commun. Phys. Lab. Univ. Leiden No. 224b, 7-10 (1933) 1 fig 2 tab 9 ref, Repr. from Koninkl. Ned. Akad. Wetenschap. Proc. 36, 378 (1933)
MF No. 176-V A3 B1 C6 D1 E1 F7 G1
*neon, *solidified gas, *melting curve, temperature effect

16286 La courbe de fusion de l'hydrogene jusqu'a 6105kg/cm2. The fusion curve of hydrogen up to 610.5 kilograms/square centimeter.
Keesom,W.H. Lisman,J.H.C.
Commun. Phys. Lab. Univ. Leiden No. 221a, 1-4 (1932) 1 fig 2 tab 10 ref, Repr. from Koninkl. Ned. Akad. Wetenschap. Proc. 35, 607 (1932)
MF No. 176-W A3 B2 C6 D1 E1 F7 G1
*hydrogen, *solidified gas, *melting curve, temperature effect

16287 The melting curve of nitrogen to 110 kg/cm2.
Keesom,W.H. Lisman,J.H.C.
Commun. Phys. Lab. Univ. Leiden No. 232b (1934) 4 pp 1 fig 22 ref, Repr. from Physica 1, 735 (1933-34)
MF No. 176-T A3 B1 C7 D1 E1 F7 G1
*nitrogen, *solidified gas, *melting curve, temperature effect

16288 New measurements on the specific heat of liquid helium.
Keesom,W.H. Keesom,A.P.
Commun. Phys. Lab. Univ. Leiden No. 235d, 1-13 (1935) 6 fig 2 tab 11 ref, Repr. from Physica 2, 557 (1935)
MF No. 176-S A3 B1 C5 D1 E1 F7 G1
*helium, *liquid, saturated liquid, *specific heat, lambda

16289 The melting-curve of hydrogen to 55 kg/cm2.
Onnes,H.K. van Gulik,W.
Commun. Phys. Lab. Univ. Leiden No. 184a, 3-6 (1926) 2 fig 2 tab 6 ref
MF No. 176-R A3 B1 C6 D1 E1 F7 G1
*hydrogen, *solidified gas, *melting curve, pressure effect

16290 Solid helium.
Keesom,W.H.
Commun. Phys. Lab. Univ. Leiden No. 184b, 9-20 (1926) 2 fig 2 tab 9 ref
MF No. 176-Q A3 B1 C5 D1 E1 F7 G1
*helium, *solidified gas, *melting curve, pressure effect,

16291 La mesure des temperatures tres basses. XXXI. Tensions de vapour de l'hydrogene et quelques nouvelles determinations thermometriques dans le domaine de l'hydrogene liquide. The measurement of very low temperatures. XXXI. Vapor pressure of hydrogen and some new thermometric determinations in the region of liquid hydrogen.
Martinez,J.P. Onnes,H.K.
Commun. Phys. Lab. Univ. Leiden No. 156b, 35-43 (1922) 4 fig 1 tab 4 ref, Repr. from Arch. neerl. sci. IIIA 6, 31-39 (1922)
DDC AD 410 311L MF No. 176-M A3 B2 C6 D1 E1 F7 G1 22
*hydrogen, *liquid, *vapor pressure, saturated liquid

16292 Isopycnals of liquid helium. I.
Keesom,W.H. Keesom,A.P.
Commun. Phys. Lab. Univ. Leiden No. 224d, 14-20 (1933) 2 fig 2 tab 13 ref, Repr. from Koninkl. Ned. Akad. Wetenschap. Proc. 36, 482 (1933)
MF No. 176-U A3 B1 C5 D1 E1 F7 G1
*helium, *liquid, *PVT data, lambda temperature, isochore

16293 New measurements on the vapour pressure curve of liquid helium. II.
Keesom,W.H. Weber,G. Schmidt,G.
Commun. Phys. Lab. Univ. Leiden No. 202c, 25-37 (1929) 1 fig 6 tab 7 ref, Repr. from Koninkl. Ned. Akad. Wetenschap. Proc. 32, 1314 (1929)
MF No. 176-L A3 B1 C4 D1 E1 F7 G1
*helium, *liquid, *vapor pressure, thermomolecular pressure

16294 Isopycnals of liquid helium. I.
Keesom,W.H. Keesom,A.P.
Commun. Kamerlingh Onnes Lab. Univ. Leiden No. 224c, 21-24 (1933) 1 fig 3 tab 2 ref, Repr. from Koninkl. Ned. Akad. Wetenschap. Proc. 36, 612 (1933)
MF No. 176-U A3 B1 C5 D1 E1 F7 G1
*helium, *liquid, *PVT data, isochore, *melting curve, *phase

16295 Contribution a l'etude de l'etat liquide. I. Contribution to the study of the liquid state. I.
Bauer,E. Magat,M. Surdin,M.
J. phys. radium 7, 441-47 (1936) 5 fig 3 tab 6 ref
CA 31 1268 9 MF No. 175-F A3 B2 C6 D1 E2 F7 G1
*hydrogen, *argon, *water, *inorganic fluid, *solidified gas, hydrogen chloride, *liquid, *density, critical density, *heat of fusion, *heat of vaporization, *compressibility, *surface

16296 Korrespondierende Zustande fur Zahigkeit, Warmeleitfahigkeit und Prandtl-Zahl. Corresponding states for viscosity, thermal conductivity and Prandtl number.
Codegone,C.
Allgem. Warmtech. 8, No. 3, 49-53 (1957) 9 fig 8 tab 7 ref
CA 54 5197 f MF No. 174-S A3 B3 C1 D3 E3 F7 G1
*reduced variable, law of corresponding states, *thermal conductivity, *viscosity, *transport property, prandtl number, *liquid, *gaseous, *hydrogen, *helium, *oxygen, *nitrogen,

16298 A theoretical and experimental investigation of the transport properties of carbon dioxide and carbon dioxide-air mixtures.
Novotny,J.L.
Minn. Univ., Minneapolis, Master Thesis (1958) 73 pp 14 fig 5 tab 37 ref
A3 B1 C8 D1 E1 F9 G7
*air, *carbon dioxide, *gaseous, *gaseous mixture, *binary system, *thermal conductivity, *viscosity, *transport property,

16299 The viscosity of several liquid refrigerants at atmospheric pressure.
Lilios,N.
Purdue Univ., Lafayette, Ind. Master Thesis (1957) 72 pp 20 fig 7 tab 29 ref
A3 B1 C8 D1 E1 F9 G7
*refrigerant, freon 12, freon 113, freon 114, freon, *liquid,

16301 The viscosity of several fluorinated hydrocarbon compounds in the vapor phase.
Kamien,C.Z.
Purdue Univ., Lafayette, Ind. Master Thesis (1956) 99 pp 23 fig 18 tab 44 ref
A3 B1 C2 D1 E1 F9 G7
*refrigerant, freon 12, freon 13, freon 14, freon 21, freon 22, freon 23, freon 114, freon 115, freon, *gaseous, *viscosity,

16302 Viscosity-reduced state correlation for the inert gases.
Shirotake,Hiroshi
Northwestern Univ., Evanston, Ill. Master Thesis (1957) 24 pp 8 fig 5 tab 30 ref
MF No. 176-C A3 B1 C1 D3 E3 F9 G7
*reduced variable, law of corresponding states, *viscosity, *liquid, *gaseous, *helium, *neon, *argon, *rare gas, krypton,

16303 Reduced thermal conductivity correlation for the inert gases.
Owens,E.J.
Northwestern Univ., Evanston, Ill. Master Thesis (1956) 45 pp 9 fig 6 tab 59 ref
MF No. 174-N A3 B1 C1 D3 E3 F9 G7
*reduced variable, law of corresponding states, *thermal conductivity, *liquid, *gaseous, *helium, *neon, *argon,

16304 Density-reduced state correlations for the inert gases.
Hamrin,C.E.Jr.
Northwestern Univ., Evanston, Ill. Master Thesis (1957) 32 pp 7 fig 4 tab 73 ref
MF No. 174-B A3 B1 C1 D3 E3 F9 G7
*reduced variable, law of corresponding states, *density, *liquid, *gaseous, *helium, *neon, *argon, *rare gas, xenon, krypton

16308 A generalized P-V-T correlation for gases.
Farell,J.L.
Purdue Univ., Lafayette, Ind. Master Thesis (1956) 52 p 5 fig 4 tab 20 ref
A3 B1 C1 D1 E3 F9 G7
*equation of state, *reduced variable, law of corrresponding states, *PVT data, *gaseous, compressibility factor, *methane, *carbon monoxide, *hydrogen, *ammonia, *propane, *ethane, *ethylene, *carbon dioxide

16317 Estimated viscosities and thermal conductivities of gases at high temperatures.
Svehla,R.A.
Natl. Aeronaut. Space Admin. Tech. Rept. R-132 (1962) 140 pp 7 fig 3 tab 145 ref
ASTIA AD 272 963 A3 B1 C7 D1 E3 F5 G5
*specific heat, *viscosity, *thermal conductivity, *gaseous, *air, *argon, *methane, *fluorine, *hydrogen, *helium, *nitrogen,

16320 The liquefaction and solidification of argon.
Olszewski,K.
Trans. Roy. Soc. (London) A186, 253-57 (1895) 1 fig 3 tab
MF No. 178-D A3 B1 C7 D1 E1 F6 G1
*argon, *critical constants, *boiling temperature, melting point

16321 Solidification of mixtures of helium isotopes.
Esel'son,B.N. Lazarev,B.G.
Akad. Nauk S.S.S.R. Doklady 97, 61-64 (1954) 4 fig 9 ref
MF No. 178-K A3 B7 C5 D3 E1 F7 G1
helium 3-helium 4 mixture, *helium, *melting curve, helium 3,

16330 Properties of the condensed inert gases.
Dobbs,E.R. Figgins,B.F. Heastie,R. Jones,G.O. Walker,P.A.
LOW TEMPERATURE PHYSICS AND CHEMISTRY, Proc. 5th Intern. Conf. on Low Temp. Phys., Madison, Wisc. 1957, 516-18 (1958) Univ. Wisconsin Press, Madison, 4 fig 9 ref
MF No. 174-X A3 B1 C6 D1 E1 F6 G2
*argon, *solidified gas, *density, *thermal property, debye

16331 Isotherms of monatomic substances and of their binary mixtures. XI. Remarks upon the critical temperature of neon and upon the melting point of oxygen.
Onnes,H.K. Crommelin,C.A.
Communs. Phys. Lab. Univ. Leiden No. 121c, 29-31 (1911) 5 ref
Trans. from Verslag Gewone Vergader. Afdel. Natuurk. Koninkl. Ned. Akad. Wevenschap. 19, 73-74 (May 1911)
MF No. 178-N A3 B1 C7 D1 E1 F7 G1
*oxygen, melting temperature, *neon, *critical constants,

16332 The direct determination of the critical temperature and critical pressure of normal deuterium. Vapor pressures between the boiling and critical points.
Friedman,A.S. White,D. Johnston,H.L.
J. Am. Chem. Soc. 73, 1510-11 (1951) 1 fig 1 tab 7 ref
CA 45 5992i A3 B1 C6 D1 E1 F6 G1
*deuterium, *liquid, *vapor pressure, *boiling temperature, *critical constants, *triple point, equation

16335 Liquid viscosities of methane and propane.
Swift,G.W. Christy,J.A. Kurata,F.
A.I.Ch.E. Journal 5, 98-102 (1959) 7 fig 2 tab 11 ref
MF No. 171-K A3 B1 C7 D1 E1 F6 G1
*viscosity, *liquid, *methane, *propane, boiling to critical

16337 On the phase transition and excitations in liquid helium.
Borelius,G.
Arkiv Fysik 14, No. 10, 127-32 (1959) 3 fig 2 tab 11 ref
MF No. 177-Y A3 B1 C5 D1 E2 F7 G1
*helium, helium I, helium II, *liquid, *internal energy, *entropy,

16338 Die Umwandlung flussiges Helium I - flussiges Helium II unter Druck. The transition liquid helium I - liquid helium II under pressure.
Keesom,W.H. Clusius,K.
Communs. Phys. Lab. Univ. Leiden No. 216b, 9-14 (1932) 3 fig 1 tab 6 ref, Rept. from, Koninkl. Ned. Akad. Wetenschap. Proc. 34, 603 (1931)
MF No. 178-B A3 B3 C5 D1 E1 F7 G1
*helium, helium I, helium II, *phase transition property, second order transition, lambda temperature, *phase diagram,

16339 Further experiments with liquid helium. BA. Preliminary determinations of the latent heat of vaporization of liquid helium.
Dana,L.I. Onnes,H.K.
Communs. Phys. Lab. Univ. Leiden No. 179c, 23-34 (1925) 3 fig 4 tab 3 ref, Repr. from Koninkl. Ned. Akad. Wetenschap. Proc. 29, 1051-60 (1926)
MF No. 176-K A3 B1 C5 D1 E1 F7 G1
*helium, *liquid, saturated liquid, *density, *heat of vaporization, *gaseous, saturated vapor, *vapor pressure

16340 Rapport sur les tensions de vapeur du neon solide et liquide et de l'helium liquide. Vapor pressure of solid and liquid neon and of liquid helium.
Verschaffelt,J.E.
Communs. Phys. Lab. Univ. Leiden Suppl. No. 64d, 31-36 (1928) 1 fig 3 tab 11 ref, Repr. from Proc. Intern. Congr. Refrig., 5th, Rome (Apr 1928)

16356 New measurements of liquid helium temperatures. II. The vapour pressure curve of liquid helium.
Schmidt,G. Keesom,W.H.
Communs. Kamerlingh Onnes Lab. Univ. Leiden No. 250c, 1-7 (1937) 1 fig 4 tab 4 ref, Repr. from Physica 4, 971 (1937)
MF No. 174-B A3 B1 C5 D1 E1 F7 G1
*helium, helium I, helium II, *liquid, *vapor pressure, lambda

16357 The rectilinear diameter for oxygen.
Mathias,E. Onnes,H.K.
Communs. Phys. Lab. Univ. Leiden No. 117, 3-23 (1910) 3 fig 5 ref, Trans. from Verslag Gewone Vergader. Afdel. Natuurk. Koninkl. Ned. Akad. Wetenschap. 19, 1039-57 (Jan 1911)
MF No. 174-Z A3 B1 C7 D1 E1 F7 G1
*oxygen, *liquid, *gaseous, saturated liquid, saturated vapor, *density, rectilinear diameter

16358 Siedepunkt, Gefrierpunkt und Dampfspannung des reinen Stickstoffs bei niedrigen Drucken. Boiling point, freezing point and vapor pressure of pure nitrogen at low pressures.
Fischer,K.T. Alt,H.
Ann. Physik 9, 1149-85 (1903) 5 fig 8 tab 41 ref
MF No. 174-C A3 B3 C7 D1 E1 F7 G1
*nitrogen, *liquid, *vapor pressure, *boiling temperature,

16361 Latent heats of vaporization and expansion.
Hammick,D.L.
Phil. Mag. 44, No. 261, 590-94 (Sept 1922) 1 tab
MF No. 175-J A3 B1 C1 D1 E2 F6 G1
*heat of vaporization, *hydrogen, *nitrogen, *oxygen, *argon,

16362 Untersuchungen uber die Schmelzkurve des Heliums. I. Researches on the melting curve of helium. I.
Simon,F. Ruhemann,M. Edwards,W.A.M.
Z. physik. Chem. (Leipzig) B2, 340-44 (1929) 3 tab 4 ref
CA 23 2860 MF No. 173-Y A3 B3 C5 D1 E1 F7 G1
*helium, *melting curve, temperature effect, helium 4

16363 Untersuchungen uber die Schmelzkurve des Heliums. II. Researches on the melting curve of helium. II.
Simon,F. Ruhemann,M. Edwards,W.A.M.
Z. physik. Chem. (Leipzig) B6, 62-77 (1929) 8 fig 1 tab 12 ref
MF No. 173-Z A3 B3 C6 D1 E1 F7 G1
*helium, *melting curve, equation, temperature effect

16364 Die Schmelzkurven von Wasserstoff, Neon, Stickstoff und Argon. (Berichtigung.) Melting curves for hydrogen, neon, nitrogen and argon. (Correction.).
Simon,F. Ruhemann,M. Edwards,W.A.M.
Z. physik. Chem. (Leipzig) B7, (1930) 1 fig
MF No. 173-Z A3 B3 C1 D3 E3 F7 G1
*hydrogen, *neon, *nitrogen, *argon, *melting curve, correction

16365 The volume change on melting of He3 and He4 up to 3500 kg/cm2.
Mills,R.L. Grilly,E.R.
LOW TEMPERATURE PHYSICS AND CHEMISTRY, Proc. 5th Intern. Conf. on Low Temp. Physics, Madison, Wisc., 1957, 106-08 (1958) Univ. Wisconsin Press, Madison, 3 fig 2 tab 3 ref
MF No. 173-X A3 B1 C5 D3 E1 F6 G2
*helium, helium 3, *solidified gas, *liquid, *density, *melting curve, *phase diagram, *phase transition property, solid-solid

16366 Specific heat of liquid He4 between 0.4 and 1.5 degrees K.
Markham,A.H. Pearce,D.C. Netzel,R.G. Dillinger,J.R.
LOW TEMPERATURE PHYSICS AND CHEMISTRY, Proc. 5th Intern. Conf. on Low Temp. Physics, Madison, Wisc. (1957) 45-48 (1958) Univ. Wisconsin Press, Madison, 1 fig 1 tab 5 ref
MF No. 174-X A3 B1 C4 D1 E1 F6 G2
*helium, helium 4, *liquid, *specific heat, *entropy

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Fairbank,W.M. Buckingham,M.J. Kellers,C.F.
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*hydrogen, *hydrogen deuteride, *liquid, *vapor pressure, *solidified gas, equation, *heat of fusion, *heat of vaporization

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*nitrogen, *gaseous, *joule-thomson coefficient, enthalpy, temperature effect, *specific heat, inversion curve

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*hydrogen, *nitrogen, *carbon monoxide, *methane, *organic fluid, *hydrocarbon, *gaseous, *PVT data, compressibility factor,

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MF No. 181-W A3 B3 C8 D1 E1 F7 G1
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*argon, *helium, *gaseous, *thermal conductivity, *air

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*argon, *gaseous, *thermal conductivity, *air

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*PVT data, compressibility factor, *gaseous, *hydrogen, *carbon monoxide, *nitrogen, *oxygen, *air, pressure effect, *carbon dioxide, oxide of nitrogen

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*argon, *gaseous, *viscosity

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*argon, *gaseous, *PVT data, *density, *index of refraction

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*argon, *helium, *hydrogen, *gaseous, *gaseous mixture, *binary system, *PVT data, second virial coefficient, intermolecular

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*argon, *gaseous, *PVT data, *density

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*argon, *gaseous, *density, *physical property, atomic weight

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*argon, *gaseous, *physical property, *density, atomic weight, *nitrogen

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*argon, *solidified gas, *thermal conductivity, temperature

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*nitrogen, *air, *carbon dioxide, *gaseous, *thermal conductivity,

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*neon, *equation of state, *density, saturated vapor, saturated liquid, *entropy, T-S diagram, *enthalpy, *triple point, *critical constants, *vapor pressure, *liquid, *gaseous

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*oxygen, *nitrogen, *argon, *hydrogen, *parahydrogen, *velocity of sound, *density, *specific heat, *compressibility, *expansivity,

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*thermodynamic property, *helium, *hydrogen, *parahydrogen, *neon, *nitrogen, *oxygen, *carbon monoxide, *argon, review,

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*liquid mixture, *oxygen, *argon, *binary system, *density, *viscosity, *surface tension, temperature effect, excess property

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*thermal conductivity, *neon, *argon, krypton, xenon, *rare gas, temperature effect, *viscosity, *gaseous, *reduced variable,

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*carbon monoxide, *carbon dioxide, *liquid, *boiling temperature, *triple point, *specific heat, lattice parameter, *vapor pressure, *solidified gas, second virial coefficient, *entropy, *heat of sublimation, *heat of vaporization, solid-solid transition

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A3 B1 C8 D3 E1 F6 G1
*argon, *specific heat, *critical region, *gaseous

17274 Measurements on the equation of state of liquid argon and methane up to 300 kg/cm-2 at low temperatures.
Van Itterbeek,A. Verbeke,O. Staes,K.
Physica 29, No. 6, 742-54 (Jun 1963) 5 fig 8 tab 10 ref
A3 B1 C7 D1 E1 F6 G1
*argon, *equation of state, *methane, *density, *liquid, *specific heat, specific heat ratio, *entropy, *velocity of sound, *PVT data, *vapor pressure, second virial coefficient, third virial coefficient, virial coefficient

17275 A direct measurement of the minimum in the melting curve of 4He.
Le Pair,C. Taconis,K.W. De Bruyn Ouboter,R. Das,P.
Physica 29, No. 6, 755-56 (Jun 1963) 1 fig 2 ref
A3 B1 C4 D3 E1 F6 G1
*helium, *melting curve, helium 4, *solidified gas

17316 Cooling to cryogenic temperatures by sublimation.
Weinstein,A.I. Friedman,A.S. Gross,U.E.
ADVANCES IN CRYOGENIC ENGINEERING 9, 490-95 (Proc. 1963 Cryogenic Eng. Conf.) Plenum Press, New York (1964) Paper H-7, 4 fig 2 tab
A3 B1 C7 D1 E1 F6 G2 G4
*solidified gas, *vapor pressure, *methane, argon, neon, carbon monoxide, nitrogen, hydrogen, sublimation;

17336 Vapor-liquid equilibria, correlation by means of a modified Redlich-Kwong equation of state.
Wilson,G.M.
Cryogenic Eng. Conf., Boulder, Colo. (Aug 1963) Paper K-2, 26 pp 10 fig 5 tab 13 ref
A3 B1 C7 D1 E1 F8 G9
*equation of state, *gaseous mixture, *liquid mixture, *critical constant, critical pressure, critical temperature, *nitrogen, *methane, second virial coefficient, law of corresponding states, *phase equilibrium, vapor pressure of mixture, *hydrogen, *helium

17386 Viscosity of hydrogen in the gaseous and liquid states for temperatures up to 5000 degrees K.
Stiel,L.I. Thodos,G.
Ind. Eng. Chem. Fundamentals 2, No. 3, 233-37 (Aug 1963) 4 fig 61 ref
A3 B1 C6 D3 E2 F6 G1 G3
*hydrogen, *gaseous, *viscosity, density, *reduced variable, saturated liquid, *liquid, saturated vapor;

17393 Transport properties of He3, He4, H2, D2, T2, and Ne in the liquid state according to the quantum mechanical principle of coresponding states.
Kerrisk,J.F. Rogers,J.D. Hammel,E.F.
ADVANCES IN CRYOGENIC ENGINEERING 9, 168-96 (Proc. 1963 Cryogenic Eng. Conf.) Plenum Press, New York (1964) Paper D-4, 7 fig 4 tab 36 ref
A3 B1 C5 D1 E3 F6 G2 G4

17398 Thermodynamic properties of hydrogen from room temperature to 100,000 degrees K.
Rosenbaum,B.M. Levitt,L.
Natl. Aeronaut. Space Admin. Tech. Note No. D-1107 (Jan 1962) 41 pp 2 fig 5 tab 6 ref
NASA N62 10029 A3 B1 C2 D1 E2 F3 G6
*hydrogen, *density, *entropy, *enthalpy, morse function,

17399 Properties and aplications of the freon fluorocarbons.
Du Pont de Nemours,E.I. and Co.
Du Pont de Nemours, E.I. and Co., Wilmington, Del., Tech. Bull. No. B-2 (1962) 11 pp
A3 B1 C D E F8 G5
*refrigerant, freon, *vapor pressure, *liquid, *gaseous, *boiling temperature, *critical constant, *specific heat, *thermal conductivity, *viscosity, *surface tension, *refractive

17401 Inlet design considerations for a liquid hydrogen pump.
Vanica,D.F. Beveridge,J.H.
Cryogenic Eng. Conf., Boulder, Colo. (Aug 1963) Paper J-2, 20 pp 8 fig 2 ref
A6 B1 C6 D3 E1 F8 G9
*hydrogen, *liquid, saturated liquid, isentropic expansion

17412 The correlation of experimental pressure-density-temperature and specific heat data for parahydrogen.
Roder,H.M. Weber,L.A. Goodwin,R.D.
Intern. Congress of Refrig. Conf., Munich (Aug-Sept 1963) Preprint 5 pp 2 fig 1 tab 10 ref.
A3 B1 C6 D1 E1 F1 G9
*parahydrogen, *PVT data, *specific heat, saturated liquid, *liquid, *entropy, *density, *heat of vaporization

17443 Pressure-volume-temperature relations and intermolecular potentials for methane and tetrafluoromethane.
Douslin,D.R.
PROGRESS IN INTERNATIONAL RESEARCH ON THERMODYNAMIC AND TRANSPORT PROPERTIES (Symp. on Thermophysical Properties, 2nd, Princeton, N.J., 1962) 135-46, Academic Press, N.Y. (1962) 4 fig 5 tab 20 ref
A3 B1 C8 D1 E2 F6 G2

17454 Effect of pressure on the thermal conductivity of a gas.
Minter,C.C.
Naval Res. Lab., Washington,D.C., Rept. No. NRL 5907 (Feb 1963) 21 pp 7 fig 5 tab 5 ref
DDC AD 298 937 A3 B1 C8 D1 E1 F5 G6
*thermal conductivity, *gaseous mixture, *binary system, *hydrogen, *argon, *nitrogen, *carbon dioxide, *air, *gaseous, pressure effect, oxide of nitrogen, *inorganic fluid, *deuterium

17538 MULTICOMPONENT VISCOSITIES OF GASEOUS MIXTURES AT HIGH TEMPERATURES
SAXENA,S.C. NARAYANNAN,T.K.S.
INC. ENG. CHEM. FUNDAMENTALS VOL. 1, NO. 3, 191-99 (1962) 37 REF
CNRS 24-3-4382 A3 B1 C2 D E1 F6 G1
•BINARY SYSTEM, •GASECUS MIXTURE, •VISCOSITY, •ARGON, •HELIUM,
17558 •NITROGEN, CARBON DIOXIDE, •OXYGEN, •HYDROGEN, •METHANE, •CARBON
17607 MONOXIDE, •WATER, •AIR
17618 See Appendix
17624 LAMBDA ANOMALY IN THE HEAT CAPACITY OF PARA ENRICHED SOLID DEUTERIUM.
GRENIER,G. WHITE,D.
J. CHEM. PHYS. VOL. 37, NO. 7, 1563-64 (1962)
CNRS 24-3-9257 A3 B1 C5 D E1 F6 G1
•DEUTERIUM, •SPECIFIC HEAT, •SOLIDIFIED GAS, ANOMALY, •PARADEUTERIL ENTROPY

17625 CONTRIBUTION A LA THECRIE STATISTIQUE DES SYSTEMES CONDENSES. CONTRIBUTION TO THE STATISTICAL THEORY OF CONDENSED SYSTEMS.
ROTT,L.A.
UKRAIN FIZ. ZHUR. VOL. 7, NO. 7, 686-92 (1962)
CNRS 24-3-9260 A3 B7 C5 D E3 F7 G1
•CRITICAL CONSTANT, CRITICAL TEMPERATURE, •GASEOUS, •HYDROGEN,
17638 •HELIUM, •NEON, •ARGON, KRYPTON, XENON, •OXYGEN, CHLORINE,
17663 •NITROGEN, •RARE GAS, •HALOGEN
See Appendix
17679 THERMODYNAMIC PROPERTIES OF CH4 AND CD4. INTERPRETATION OF THE PROPERTIES OF THE SOLIDS.
COLWELL,J.H. GILL,E.K. MORRISON,J.A.
J. CHEM. PHYS. VOL. 39, NO. 3, 635-53 (AUG 1963) 8 FIG 12 TAB 66 RE
A3 B1 C5 D1 E1 F6 G1
•METHANE, •DEUTERO COMPOUND, DEUTERO METHANE, •SPECIFIC HEAT, •HEAT OF FUSION, •HEAT OF VAPORIZATION, EXCESS PROPERTY, •ENTROPY, •HEAT OF SUBLIMATION, •SOLIDIFIED GAS, •LIQUID, SOLID-SOLID TRANSITION, •TRIPLE POINT, •PHASE TRANSITION PROPERTY

17718 ROLE OF ATOM-PAIR EXCHANGES IN THE MELTING OF NE, A, KR, AND XE.
NARCI,V. AUFFRAY,J.P. PERCUS,J.K.
AM. PHYS. SOC. MEETING, WASH., D. C. (APR 22-25, 1963)
PAPER HA9 (ABSTR. IN BULL. AM. PHYS. SOC. VOL. 8, NO. 4, 323, APR 1963)
A3 B1 CC D E F8 G9 63
•MELTING CURVE, •NEON, •ARGON, KRYPTON, XENON, •RARE GAS, DENSITY, •SOLIDIFIED GAS, •LIQUID,
A4 B1 CC D E

17721 VISCOSITY MEASUREMENTS OF LIQUID HE4 AND HE3.
WEBELER,R.W.H.
AM. PHYS. SOC. MEETING, WASH. D.C. (APR 1963) PAPER T1 (ABSTR. IN BULL. AM. PHYS. SOC. VOL. 8, NO. 4, 373, APR 1963)
A3 B1 C4 D1 E1 F8 G9
•VISCOSITY, •HELIUM, HELIUM 3, HELIUM 4, •LIQUID

17722 SURFACE TENSION OF LIQUID HE4.
NARAHARA,Y. ATKINS,K.R.
AM. PHYS. SOC. MEETING, WASH. D.C. (APR 1963) PAPER T2 (ABSTR. IN BULL. AM. PHYS. SOC. VOL. 8, NO. 4, 373, APR 1963)
A3 B1 C4 D1 E1 F8 G9
•SURFACE TENSION, •HELIUM, HELIUM 4, •LIQUID, LAMBDA TEMPERATURE
17730 See Appendix
17767 AN EXPERIMENTAL INVESTIGATION OF THE P-V-T DEPENDENCE OF CARBON DIOXIDE.
VUKALOVICH,M.P. ALTUNIN,V.V.
TEPLOENERGETIKA VOL. 6, NO. 11, 58-65 (1959) (ABSTR. IN TECH. TRANS VOL. 9, 1277, JUN 1963)
A3 B7 C D E1 F7 G1
•CARBON DIOXIDE, •PVT DATA, •EQUATION OF STATE

17774 INTERMOLECULAR POTENTIAL IN SOLID METHANE. I. INFLUENCE ON THE VIBRATIONAL SPECTRUM AND THE CRYSTAL STRUCTURE.
KIMEL,S. RON,A. HORNIG,D.F.
PRINCETON UNIV., N. J., TECH. REPT. NO. 13 (FEB 1963)
CONTR. NO. ACNR-185827, 17 PP
DDC AD 400 340 A3 B1 C7 D E3 F5 G5 63
•METHANE, •SOLIDIFIED GAS, CRYSTAL STRUCTURE, •DEUTERO-COMPOUND, SOLID-SOLID TRANSITION, LATTICE PARAMETER

17785 THERMODYNAMIC PROPERTIES OF THE SYSTEM METHANE PLUS CARBON MONOXIDE AT 90.67 DEGREES K.
MATHOT,V. STAVELEY,L.A.K. YOUNG,J.A. PARSONAGE,N.G.
TRANS. FARADAY SOC. VOL. 52, 1488-150C (1956) 5 FIG 3 TAB 35 REF
MF NO. 189-D A3 B1 C7 D1 E1 F7 G1
•LIQUID MIXTURE, •GASEOUS MIXTURE, •BINARY SYSTEM, •METHANE, •CARBON MONOXIDE, •FREE ENERGY, EXCESS PROPERTY, VAPOR PRESSURE OF MIXTURE, •DENSITY, MOLECULAR VOLUME
17833 See Appendix
17838 VACANCY CONTRIBUTION TO THE SPECIFIC HEAT OF SOLID ARGON.
FOREMAN,A.J.E. LIDIARD,A.B.
PHIL. MAG. VOL. 8, NO. 85, 97-103 (JAN 1963) 2 FIG 17 REF
MF NO. 184-N A3 B1 C6 D3 E3 F6 G1
•ARGON, •SPECIFIC HEAT, •SOLIDIFIED GAS

17875 LOW TEMPERATURE PHYSICS.
SQUIRE,C.F.
RICE UNIV., LOW TEMP. LAB., HOUSTON, TEX., ANNUAL PROGR. REPT. (FEB 1950) CONTR. NO. N6ONR-224, 60 PP 29 REF
ASTIA AD 121 132 A2 B1 C5 D E1 F5 G5 5C
•INORGANIC SOLID, TITANATE, BARIUM, •DIELECTRIC CONSTANT, •HELIUM, •LIQUID, HELIUM I, •THERMAL CONDUCTIVITY, •DIELECTRIC CONSTANT

17935 LOW TEMPERATURE PHYSICS RESEARCH.
LANE,C.T. FAIRBANK,H.A.
YALE UNIV., NEW HAVEN, CONN., RESEARCH UNDER CONTR. NO. DA-ORD-21, DA-ARO (D)-31-124-G7 (AUG 1960-JUL 1963) (ABSTR. IN RES. IN PROGRESS 1961, U.S. ARMY RES. OFF. ANNUAL REPT., 1-9)
A3 B1 C4 D E1 F8 G5
•HELIUM, HELIUM 3, •SPECIFIC HEAT, •EXPANSIVITY, THERMAL EXPANSION, HELIUM 4, •SOLIDIFIED GAS, •PHASE TRANSITION PROPERTY, SOLID-SOLID TRANSITION, •VELOCITY OF SOUND, •LIQUID

17945 HIGH PRESSURE STUDIES AT LOW TEMPERATURE.
STEWART,J.W. COLEMAN,R.V.
VIRGINIA UNIV., CHARLOTTESVILLE, RESEARCH UNDER CONTR. NO. DA-ORD-31-124-61-G89 (JAN 1961-JAN 1964) (ABSTR. IN RES. IN PROGRESS 1961, U.S. ARMY RES. OFF. ANNUAL REPT., 1-37)
A3 B1 C1 D E1 F8 G5
•SOLIDIFIED GAS, •HELIUM, •ARGON, KRYPTON, •HYDROGEN, •RARE GAS, •INORGANIC FLUID, HYDROGEN CHLORIDE, HYDROGEN BROMIDE, HYDRIDE, FLUORIDE, SILICON, SOLID-SOLID TRANSITION, HIGH PRESSURE

17960 DIE TATIGKEIT DER PHYSIKALISCH-TECHNISCHEN REICHSANSTALT IM JAHRE 1927. THE ACTIVITY OF THE PHYSICAL-TECHNICAL INSTITUTE IN THE YEAR 1927.
OTTC,J.
Z. INSTRUMENTENK. VOL. 48, 257-84 (JUN 1928) 7 FIG 1 TAB 163 REF
MF NO. 186-R A3 B3 C8 D1 E1 F7 G1
•HELIUM, •HYDROGEN, •NEON, •NITROGEN, •ARGON, •GASEOUS, •EQUATION OF STATE, SECOND VIRIAL COEFFICIENT, THIRD VIRIAL COEFFICIENT, VIRIAL COEFFICIENT, •PVT DATA, •WATER, •SOLIDIFIED GAS, ICE, •THERMAL CONDUCTIVITY

17961 ON THE DETERMINATION OF MOLECULAR FIELDS. I. FROM THE VARIATION OF THE VISCOSITY OF A GAS WITH TEMPERATURE. II. FROM THE EQUATION OF STATE OF A GAS.
JONES,J.E.
PROC. ROY. SOC. (LONDON) VOL. A106, 441-76 (1924) 3 FIG 9 TAB 55 RE
MF NO. 186-S A3 B1 C7 D1 E3 F6 G1
•ARGON, •GASEOUS, •VISCOSITY, •CARBON DIOXIDE, MOLECULAR FIELD, INTERMOLECULAR FORCE, •ATOMIC MOLECULAR PROPERTY, •EQUATION OF STATE, SECOND VIRIAL COEFFICIENT

17962 DIE REIBUNG, WARMELEITUNG UND DIFFUSION IN GASMISCHUNGEN. VI. REIBUNGSBESTIMMUNG AN REINEN GASEN DURCH DIREKTE MESSUNG UND DURCH SOLCHE AN IHREN GEMISCHEN. THE VISCOSITY, HEAT CONDUCTIVITY AND DIFFUSION IN GAS MIXTURES. VI. VISCOSITY DETERMINATIONS OF PURE GASES BY DIRECT MEASUREMENT AND BY MEANS OF MIXTURES.
TRAUTZ,M. LUCEWIGS,W.
ANN. PHYSIK VOL. 3, 409-28 (1929) 5 TAB 7 REF
MF NO. 186-T A3 B3 C8 D1 E1 F7 G1
•VISCOSITY, •GASEOUS, •AIR, •HYDROGEN, •CARBON MONOXIDE, •ARGON, •GASEOUS MIXTURE, •BINARY SYSTEM

17964 DETERMINATION OF VISCOSITIES AND OF THE STOKES-MILLIKAN LAW CONSTANT BY THE OIL-DROP METHOD.
ISHIDA,Y.
PHYS. REV. VOL. 21, 550-63 (1923) 3 FIG 4 TAB 24 REF
MF NO. 186-Z A3 B1 C8 D1 E1 F6 G1
17965 •VISCOSITY, •GASEOUS, •ARGON, •HELIUM, AIR, •HYDROGEN, •METHANE,
THRU •ETHANE, •CARBON DIOXIDE, •INORGANIC FLUID, OXIDE OF NITROGEN,
18015 ISOBUTANE, •BUTANE
See Appendix
18021 THECRIE DES GAZ. XXV. CALCUL DES COEFFICIENTS DE LA LOI D' ACTION DE PASSES. THEORY OF GASES. XXV. CALCULATION OF THE COEFFICIENTS FROM THE LAW OF MASS ACTION.
DUCLAUX,J.
J. CHEM. PHYS. VOL. 57, NO. 5, 374-80 (1960) 3 TAB 3 REF
MF NO. 189-G A3 B2 C7 D1 E3 F7 G1
•NITROGEN, •GASEOUS, •PVT DATA, COMPRESSIBILITY FACTOR, •EQUATION OF STATE, VIRIAL COEFFICIENT

18022 DAS LITERGEWICHT UND DAS ATOMGEWICHT DES ARGONS. THE LITER WEIGHT AND THE ATOMIC WEIGHT OF ARGON.
MOLES,E.
CHEM. BER. VOL. 60, 134-38 (1927) 12 REF
MF NO. 188-K A3 B3 C8 D1 E1 F7 G1
•ARGON, •GASEOUS, •DENSITY, •PHYSICAL PROPERTY, ATOMIC WEIGHT

18055 A COOPERATIVE PROGRAM OF FUNDAMENTAL RESEARCH AS RELATED TO JET PROPULSION OFFICE OF NAVAL RESEARCH, DEPARTMENT OF THE NAVY.
IWASAKI,H. KESTIN,J.
18026 BROWN UNIV., PROVIDENCE, R.I., REPT. NO. TR 8RN4P (APR 1963)
18033 CONTR. NO. ACNR3623(00), 47 PP
18042 DDC AD 405 745 A3 B1 C8 D E1 F5 G5
18045 •ARGON, •HELIUM, •GASEOUS MIXTURE, •BINARY SYSTEM, •VISCOSITY,
18046 EXCESS PROPERTY
18097 See Appendix
18072 DAS VERHALTNIS DER SPECIFISCHEN WARMEN VON ARGON UND SEINE ANDERUNG MIT DER TEMPERATUR. THE RATIO OF THE SPECIFIC HEATS OF ARGON AND ITS VARIATION WITH TEMPERATURE.
NIEMEYER,OSKAR
VEREINIGTEN FRIEDRICHS-UNIVERSITAT, HALLE-WITTENBERG, PH.D. THESIS (1902) 38 PP 3 FIG 2 TAB 26 REF
A3 B3 C8 D1 E1 F9 G7
•ARGON, •GASEOUS, •SPECIFIC HEAT, SPECIFIC HEAT RATIO, TEMPERATURE EFFECT
18075 See Appendix
18086 EXPERIMENTAL DETERMINATION OF THE HEAT OF MIXING FOR THE SYSTEM N2-H2 IN THE GASEOUS STATE.
KNCESTER,M. TACONIS,K.W. BEENAKKER,J.J.M.
INTERN. CONGR. OF REFRIGERATION, 11TH, MUNICH (AUG 1963) PAPER I-4 IIR 12219 A3 B1 C8 D3 E1 F8 G9
18088 •BINARY SYSTEM, •HYDROGEN, •NITROGEN, •GASEOUS MIXTURE, HEAT OF
18095 MIXING, •ENTHALPY
18107 See Appendix
18117 THERMODYNAMIC PROPERTIES OF AN AZEOTROPIC MIXTURE OF FREON-124 AND FREON-C 318.
PERELSTEIN,I.I.
INTERN. CONGR. OF REFRIGERATION, 11TH, MUNICH (AUG 1963) PAPER II-17, 3 PP 1 TAB
A3 B1 C8 D1 E1 F8 G9
•REFRIGERANT, FREON, •LIQUID MIXTURE, •BINARYTEM, •CRITICAL CONSTANT, •SPECIFIC HEAT, •ENTROPY, •ENTHALPY, •GASEOUS MIXTURE, •PVT DATA, MOLLIER DIAGRAM, SATURATED LIQUID, SATURATED VAPOR, VAPOR PRESSURE OF MIXTURE

18121 PHYSICAL ASPECTS OF BUBBLE FORMATION IN HYDROGEN AND THERMODYNAMICAL PROPERTIES OF LIQUID N-HYDROGEN.
VAN ITTERBEEK,A. VERBEKE,O. DE BOELPAEP,J. THEEUWES,F.
INTERN. CONGR. OF REFRIGERATION, 11TH, MUNICH (AUG 1963) PAPER I-20, 4 PP 1 FIG 11 REF
A3 B1 C6 D2 E1 F8 G9 63
•HYDROGEN, NORMAL HYDROGEN, •LIQUID, •PVT DATA, •EQUATION OF STATE, VIRIAL COEFFICIENT, •SPECIFIC HEAT, •VELOCITY OF SOUND, •ENTROPY, •JOULE-THOMSON COEFFICIENT, •VAPOR PRESSURE, CALCULATION,
A6 B1 C6 D2 E1
BUBBLE FORMATION, •HYDROGEN, LIQUID, CRITICAL REGION
18126 See Appendix
18128 ZUSTANDS- UND TRANSPORTGROSSEN VON ARGON-PLASMA. STATE AND TRANSPORT VALUES FOR ARGON PLASMA.
PENSKI,K.
CHEM. ING. TECH. VOL. 34, 84-87 (1962) 11 FIG 10 REF
MF NO. 179-F A3 B3 C2 D3 E3 F7 G1
•ARGON, •GASEOUS, PLASMA, HIGH TEMPERATURE, •VISCOSITY, PRANDTL NUMBER, •ENTROPY, •DENSITY, •ENTHALPY, •SPECIFIC HEAT, •THERMAL CONDUCTIVITY, •INTERNAL ENERGY

18131 SECOND VIRIAL COEFFICIENT OF KRYPTON AT LOW TEMPERATURES.
THOMAES,G. VAN STEENWINKCL,R.
NATURE VOL. 193, 160 (MAR 1962) 1 FIG 1 TAB
MF NO. 179-I A3 B1 C7 D1 E1 F7 G1
•RARE GAS, KRYPTON, •PVT DATA, VIRIAL COEFFICIENT, SECOND VIRIAL COEFFICIENT, •GASEOUS
18132 See Appendix

18140 THE SOLUBILITY, ACTIVITY COEFFICIENT, AND HEAT OF SOLUTION OF SOLID XENON IN LIQUID ARGON.
YONKER,W.P.
WASHINGTON UNIV., SEATTLE, PH. D. THESIS (1961) 52 PP (ABSTR. IN DISSERTATION ABSTR. VOL. 22, NO. 9, 3014 (MAR 1962) (UNIV. MICROFIL INC., ANN ARBOR, MICH., ORDER NO. 61-6661, MI $2.75, XEROX $3.00)
MF NO. 179-T A3 B1 C7 D1 E1 F9 G7
XENON, •RARE GAS, •SOLIDIFIED GAS, ARGON, LIQUID, SOLUBILITY, •SOLUTION, •ENTHALPY, KRYPTON, VAPOR PRESSURE OF MIXTURE

18161 thru 18182 See Appendix

18303 HIGH TEMPERATURE THERMAL CONDUCTIVITY OF GASES. MEASUREMENTS ON NITROGEN, CARBON DIOXIDE, ARGON, AND NITROGEN-CARBON DIOXIDE MIXTURES AT TEMPERATURES UP TO 775 DEGREES C.
ROTHMAN,A.J. BROMLEY,L.A.
INC. ENG. CHEM. VOL. 47, 899-906 (MAY 1955) 8 FIG 3 TAB 30 REF
A3 B1 C2 D1 E1 F6 G1 55
•THERMAL CONDUCTIVITY, •NITROGEN, •ARGON, •GASEOUS, •CARBON DIOXIDE

18332 NOTE ON THE RESONANCE METHOD OF MEASURING THE RATIO OF THE SPECIFIC HEATS OF A GAS, CP/CV.
WOOLLEY,H.W.
CAN. J. PHYS. VOL. 31, 604-12 (1953) 7 FIG 4 TAB 31 REF
A3 B1 C8 D1 E3 F7 G1 53
•SPECIFIC HEAT, SPECIFIC HEAT RATIO, •GASEOUS, •NITROGEN, •INORGANIC FLUID, OXIDE OF NITROGEN, SULFUR DIOXIDE, •ARGON, •CARBON DIOXIDE, EQUATION, CALCULATION, VELOCITY OF SOUND

18333 SUR LE RAPPORT GAMMA DES CHALEURS SPECIFIQUES DE L'ARGON SOUS PRESSION. THE SPECIFIC HEAT RATIO, GAMMA, OF ARGON UNDER PRESSURE.
LACAM,A. NOURY,J.
COMPT. REND. VOL. 236, 589-90 (1953) 1 FIG 1 TAB 5 REF
A3 B2 C8 D1 E2 F7 G1 53
•ARGON, •GASEOUS, •SPECIFIC HEAT, SPECIFIC HEAT RATIO, •PVT DATA, •VELOCITY OF SOUND, •DENSITY, PRESSURE EFFECT

18345 See Appendix

18454 RONTGENOGRAPHISCHE UNTERSUCHUNGEN AN FESTEM STICKSTOFF UND SAUERSTOFF. X-RAY INVESTIGATION OF SOLID NITROGEN AND OXYGEN.
RUHEMANN,M.
Z. PHYSIK VOL. 76, 368-85 (1932) 3 FIG 4 TAB 23 REF
MF NO. 179-C A3 B3 C6 D1 E1 F7 G1 32
•SOLIDIFIED GAS, •NITROGEN, •OXYGEN, CRYSTAL LATTICE PROPERTY, X-RAY, •TRANSFORMATION, SOLID SOLID TRANSITION, CRYSTAL STRUCTURE

18488 LOW-TEMPERATURE ABSORPTION REFRIGERATION SYSTEMS IN CHEMICAL PROCESS ENGINEERING.
NIEBERGALL,W.
INTERN. CONGR. OF REFRIGERATION, 11TH, MUNICH (AUG 1963)
PAPER VI B-3, 12 PP 8 FIG 3 TAB 25 REF
A3 B1 CC 0 E F8 G9 63
•REFRIGERANT, FREON 12, FREON 13, FREON 22, •SPECIFIC HEAT, •LIQUID, AMINE, •HEAT OF VAPORIZATION, METHYL, ETHYL, •ORGANIC FLUID, MELTING POINT

18490 TRANSPORT PHENOMENA OF GASES UNDER HIGH PRESSURES. II. THERMAL CONDUCTIVITY.
MAKITA,TADASHI
KOATSU GASU KYOKAISHI VOL. 23, NO. 10, 489-501 (OCT 1959) 7 FIG 8 TAB 77 REF
MF NO. 197-E A3 B6 C7 D3 E2 F7 G1 59
•NITROGEN, •GASEOUS, •THERMAL CONDUCTIVITY, •ARGON, •RARE GAS, KRYPTON, XENON, •HYDROGEN, •OXYGEN, •CARBON DIOXIDE, •AMMONIA, •METHANE, •ORGANIC FLUID, BENZENE

18491 NOUVELLES DETERMINATIONS DES TENSIONS DE VAPEUR DES ISOTOPES DU NEON. NEW DETERMINATION OF THE VAPOR PRESSURES OF THE ISOTOPES OF NEON.
ROTH,ETIENNE
COMM. ENERGIE AT. (FRANCE) RAPPT. NO. 1666 (1960) 109 PP
33 FIG 17 TAB 77 REF REPR. FROM, UNIVERSITY OF PARIS, PH.D. THESIS (MAR 1960)
MF NO. 197-F A3 B2 C6 D1 E1 F7 G1 60
•NEON, •ISOTOPE, •LIQUID, •SOLIDIFIED GAS, •VAPOR PRESSURE, •TRIPLE POINT, ZERO POINT ENERGY, EQUATION

18492 A PARTITION FUNCTION FOR NORMAL LIQUIDS.
WALTER,J. EYRING,H.
J. CHEM. PHYS. VOL. 9, 393-97 (MAY 1941) 2 FIG 3 TAB 18 REF
MF NO. 196-J A3 B1 C7 D1 E3 F6 G1 41
•ARGON, •LIQUID, •DENSITY, •VAPOR PRESSURE, MELTING TEMPERATURE, •CRITICAL CONSTANTS, •SPECIFIC HEAT, SECOND VIRIAL COEFFICIENT, •NITROGEN, •ORGANIC FLUID, BENZENE

18493 SOME THERMODYNAMIC PROPERTIES AND RATE PROCESSES AT SURFACES.
EYRING,H. WALTER,J. STEARN,A.E.
PUBL. AM. ASSOC. ADVAN. SCI., NO. 21, 88-97 (1943) 3 FIG 5 TAB 17 REF
MF NO. 196-K A3 B1 C6 D1 E3 F6 G1 43
•NEON, •LIQUID, •DENSITY, •VAPOR PRESSURE, MELTING TEMPERATURE, •CRITICAL CONSTANTS, •SPECIFIC HEAT, •RARE GAS, KRYPTON, XENON, PARTITION FUNCTION, CALCULATION

18500 INVESTIGATION OF THE EQUILIBRIUM OF THE COEXISTENCE OF THE LIQUID AND GASEOUS PHASES OF THE BINARY SYSTEM METHANE-ETHYLENE.
VOLEVA,L.P.
ZHUR. FIZ. KHIM. VOL. 14, NO. 2, 268-76 (1940) 7 FIG 7 TAB 19 REF
MF NO. 197-F A3 B7 C7 D1 E1 F7 G1 40
•METHANE, •ETHYLENE, •GASEOUS MIXTURE, •LIQUID MIXTURE, •BINARY SYSTEM, •PHASE EQUILIBRIA, LIQUID-VAPOR EQUILIBRIUM, •PVT DATA

18501 THE VELOCITY OF ULTRASONIC PULSES IN HYDROGEN BETWEEN 60 AND 90 DEGREES K AS A FUNCTION OF PRESSURE.
VAN ITTERBEEK,A. VAN CAEL,W.
INTERN. CONGR. OF REFRIGERATION, 11TH, MUNICH (AUG 1963)
PAPER I-19, 5 PP 3 FIG 3 TAB 5 REF
A3 B1 C7 D1 E1 F8 G9 63
•HYDROGEN, •GASEOUS, •VELOCITY OF SOUND, PRESSURE EFFECT, TEMPERATURE EFFECT, SPECIFIC HEAT RATIO

18502 DIGITAL PROGRAMS FOR PARA HYDROGEN PROPERTIES.
FARMER,O.A.
LOS ALAMOS SCI. LAB., NEW MEX., REPT. NO. LAMS-2762 (NOV 1962)
CONTR. NO. W-7405-ENG-36, 34 PP 18 FIG 1 TAB 6 REF
A3 B1 C7 D1 E3 F3 G5 62
•PARAHYDROGEN, •GASEOUS, •DENSITY, •ENTHALPY, •THERMAL CONDUCTIVITY, •VISCOSITY, •PVT DATA, COMPRESSIBILITY FACTOR, •SPECIFIC HEAT, SPECIFIC HEAT RATIO, PRANDTL NUMBER, CALCULATION

18505 THE DIFFERENCE IN THE VAPOR PRESSURES, HEATS OF VAPORIZATION, AND TRIPLE POINTS OF NITROGEN (14) AND NITROGEN (15) AND OF AMMONIA AND TRIDEUTERO-AMMONIA.
KIRSHENBAUM,I. UREY,H.C.
J. CHEM. PHYS. VOL. 10, NO. 12, 706-17 (DEC 1942) 5 FIG 10 TAB 38 REF
MF NO. 178-X A3 B1 C7 D1 E1 F6 G1 42
•NITROGEN, •ISOTOPE, •VAPOR PRESSURE, •LIQUID, •HEAT OF VAPORIZATION, •TRIPLE POINT,
A3 B1 C8 D E1
•AMMONIA, •SOLIDIFIED GAS, •DEUTERO COMPOUND, •ISOTOPE, •VAPOR PRESSURE, •LIQUID, •TRIPLE POINT

18509 ERGEBNISSE DER TIEFTEMPERATURFORSCHUNG XX. DIREKTER VERGLEICH DER DAMPF-DRUCKE VON 14N2, 14N15N UND 15N2 SOWIE VON 14N16O UND 14N18O ZWISCHEN IHREN SCHMELZ- UND SIEDEPUNKTEN. RESULTS OF LOW TEMPERATURE RESEARCH. DIRECT COMPARISON OF VAPOR PRESSURE OF 14N2, 14N15N AND 15N2 AS WELL AS FOR 14N16O, 15N16O AND 14N18O BETWEEN THEIR MELTING AND BOILING POINTS.
CLUSIUS,K. SCHLEICH,K.
HELV. CHIM. ACTA VOL. 41, 1342-58 (1958) 5 FIG 8 TAB 19 REF
MF NO. 179-B A3 B3 C7 D1 E1 F7 G1 58
•LIQUID, •NITROGEN, •ISOTOPE, OXIDE OF NITROGEN, •VAPOR PRESSURE, •TRIPLE POINT, •BOILING TEMPERATURE, •METHANE, •OXYGEN, •CARBON MONOXIDE, •INORGANIC FLUID

18512 EQUATION OF STATE FOR STOCHIOMETRIC NITROGEN-HYDROGEN MIXTURE.
KAGAVCHINSKII,Y.Z. TABACHNIKOV,A.G.
INZHENER. FIZ. ZHUR. AKAD. NAUK BELORUS S.S.R. VOL. 4, NO. 1, 116-19 (1961) 2 FIG 2 TAB 6 REF
MF NO. 179-M A3 B7 C8 D1 E1 F7 G1 61
•GASEOUS MIXTURE, •HYDROGEN, •NITROGEN, •PVT DATA, •EQUATION OF STATE, •BINARY SYSTEM

18513 EQUATION OF STATE AND THERMODYNAMIC PROPERTY OF METHANE.
ZAGARUCHENKO,V.A. VASSERMAN,A.A.
INZHENER. FIZ. ZHUR. AKAD. NAUK BELORUSS S.S.R. VOL. 4, NO. 11, 59-63 (1961) 4 TAB 15 REF
MF NO. 179-M A3 B7 C7 D1 E3 F7 G1 61
•METHANE, •EQUATION OF STATE, •PVT DATA, •GASEOUS, •SPECIFIC HEAT

18515 TEMPERATURE REPRODUCTION OF PHASE TRANSFORMATION IN SOLID OXYGEN.
ORLOVA,M.P.
IZMERITEL'NAYA TEKH. VOL. 1961, NO. 2, 21-23 (1961) 18 REF
MF NO. 179-O A3 B7 C7 D1 E1 F7 G1 61
•OXYGEN, •SOLIDIFIED GAS, SOLID-SOLID TRANSITION, MELTING POINT, •PHASE TRANSITION PROPERTY

18516 UEBER DIE MESSUNG TIEFER TEMPERATUREN. II. MEASUREMENT OF LOW TEMPERATURES. II.
LADENBURG,A. KRUGEL,C.
BER. DEUT. CHEM. GES. VOL. 33, 637-38 (1900) 1 TAB 3 REF
MF NO. 179-C A3 B3 C1 D1 E1 F7 G1 00
•BOILING TEMPERATURE, •MELTING TEMPERATURE, •OXYGEN, •AMMONIA, •METHANE, •ETHANE, •PROPANE, PROPYLENE, •ORGANIC FLUID, •INORGANIC FLUID, •LIQUID, OXIDE OF NITROGEN

18526 DIE INVERSIONSKURVE DES DIFFERENTIALEN THOMSON-JOULE-EFFEKTES DER GASE. THE INVERSION CURVE OF THE DIFFERENTIAL JOULE-THOMSON EFFECT IN GASES.
JACOB,M.
PHYSIK Z. VCL. 22, NO. 3, 65-69 (FEB 1921) 2 FIG 4 TAB 28 REF
MF NO. 193-T A3 B3 C8 D1 E1 F7 G1 21
•CARBON DIOXIDE, •ETHYLENE, •OXYGEN, •AIR, •NITROGEN, •HYDROGEN, •GASEOUS, •JOULE-THOMSON COEFFICIENT, INVERSION CURVE

18567 A COMPARISON OF TWO MELTING-PRESSURE EQUATIONS CONSTRAINED TO THE TRIPLE POINT USING DATA FOR ELEVEN GASES AND THREE METALS.
GOODWIN,R.D. WEBER,L.A.
NATL. BUR. STANDARDS TECH. NOTE NO. 183 (OCT 1963) 23 PP 4 FIG 7 TAB 31 REF
A3 B1 C6 D1 E3 F4 G6 63
•MELTING CURVE, EQUATION, •SOLIDIFIED GAS, •HYDROGEN, •DEUTERIUM, •TRITIUM, •NEON, •ARGON, KRYPTON, XENON, •NITROGEN, •OXYGEN, •CARBON DIOXIDE, •RARE GAS

18582 THE USE OF REGENERATORS IN LOW-TEMPERATURE ENGINEERING, PARTICULARLY FOR CONCENTRATING ETHYLENE FROM COKE-OVEN GAS.
BECKER,RUDOLF
LINDE REPTS. ON SCI. TECHNOL., NO. 1, 25-33 (1961) 6 FIG 1 TAB
A3 B1 C1 D3 E2 F7 G1 61
•VAPOR PRESSURE, •HYDROGEN, •LIQUID, •NITROGEN, •CARBON MONOXIDE, •METHANE, •ACETYLENE, •ETHANE, •ETHYLENE, •CARBON DIOXIDE, •ORGANIC FLUID

18598 PROPAGATION OF ULTRASONIC WAVES IN COMPRESSED NITROGEN.
GLINSKII,A.A.
PRIMENENIE UL'TRAAKUSTIKI K ISSLED. VESHCHESTVA, 131-38 (1962)
CA 59 3334H A3 B7 C2 D E1 F7 G1 62
•NITROGEN, •GASEOUS, •VELOCITY OF SOUND, •ARGON, PRESSURE EFFECT

18605 ESTIMATION OF ENTHALPIES, MULTICOMPONENT HYDROCARBON MIXTURES AT THEIR SATURATED VAPOR AND LIQUID STATES.
STEVENS,W.F. THODOS,G.
A.I.CH.E. JOURNAL VOL. 5, 293-96 (1963)
•CA 59 [illegible]71H A3 B1 C8 D E3 F6 G1 63
•HYDROCARBON, •LIQUID, •METHANE, •ETHANE, •PROPANE, •BUTANE, •GASEOUS, •ENTHALPY, •GASEOUS MIXTURE, •LIQUID MIXTURE, SATURATED LIQUID, SATURATED VAPOR, •BINARY SYSTEM, •TERNARY SYSTEM

18672 THE INTERATOMIC POTENTIAL CURVE AND THE EQUATION OF STATE FOR ARGON.
RICE,O.K.
J. AM. CHEM. SOC. VOL. 63, 3-11 (JAN 1941) 4 FIG 3 TAB 20 REF
A3 B1 C6 D1 E3 F6 G1 41
•ARGON, •SOLIDIFIED GAS, INTERMOLECULAR FORCE, CALCULATION, •HEAT OF SUBLIMATION, DEBYE CONSTANT, •EQUATION OF STATE

18704 THEORETICAL CALCULATIONS ON SOLID ARGON.
DOMB,C. ZUCKER,I.J.
NATURE VOL. 178, 484 (SEPT 1956) 6 REF
A3 B1 C6 D1 E3 F7 G1 56
•ARGON, •SOLIDIFIED GAS, •EXPANSIVITY, THERMAL EXPANSION, GRUNEISEN PARAMETER, INTERMOLECULAR FORCE, CALCULATION

18705 CALCULATIONS OF SOLID-STATE DATA OF NEON, AND THE VAPOUR PRESSURE RATIO OF ITS ISOTOPES.
JOHNS,T.F.
PHIL. MAG. VOL. 3, 229-36 (1958) 3 FIG 1 TAB 7 REF
A3 B1 C5 D1 E3 F6 G1 58
•NEON, •ISOTOPE, •SOLIDIFIED GAS, •VAPOR PRESSURE, •EQUATION OF STATE, •FREE ENERGY, CALCULATION

18706 EINE NEUE THERMISCHE ZUSTANDSGLEICHUNG DER STOFFE FUR IHREN GAS- UND FLUSSIGKEITSZUSTAND. A NEW THERMAL EQUATION OF STATE OF MATTER IN ITS GAS AND LIQUID STATE.
HIPPAN,JOSEPH
MONATSH. CHEM. VOL. 85, 936-48 (1954) 5 FIG 2 TAB 20 REF
A3 B3 C8 D3 E3 F7 G1 54
•EQUATION OF STATE, •LIQUID, •GASEOUS, •NITROGEN, •SPECIFIC HEAT, INVERSION CURVE

18719 ABOUT THE DENSITY OF CARBON DIOXIDE IN SOLID AND LIQUID CONDITION.
BEHN,U.
ANN. PHYSIK VOL. 3, 733-43 (1900) (ABSTR. IN TECH. TRANS. VOL. 1C, NO. 7, 779, OCT 1963) (TRANS. AVAIL. SLA NO. 63-16498, $1.10)
A3 B1 C8 D E F7 G1 63
•CARBON DIOXIDE, •SOLIDIFIED GAS, •DENSITY, •LIQUID, •VAPOR PRESSURE

18736 ULTRASONIC THERMOMETER FOR LOW TEMPERATURE DETERMINATIONS.
JOURNAL OF FRANKLIN INSTITUTE
J. FRANKLIN INST. VOL. 275, NO. 1, 56-57 (1963)
CNRS 24-3-11086 A3 B1 C5 D E1 F6 G1 63
•HELIUM, •GASEOUS, •VELOCITY OF SOUND

18745 RELATION OF THE VAPOR PRESSURES IN THE SYSTEMS C12H4/C13H4/C12H30, N142C/N15N140, SO162/SO182, AND AR36/AR40.
CLUSIUS,KLAUS
J. CHIM. PHYS. VOL. 60, 66-69 (1963)
CA 59 2180H A3 B2 C8 D C1 F7 G1 63
•METHANE, DEUTERO METHANE, •DEUTERO-COMPOUND, OXICE OF NITROGEN, •ARGON, SULFUR DIOXIDE, •VAPOR PRESSURE, •INORGANIC FLUID, •LIQUID, •ISOTOPE

18750 THE DENSITY AND MISCIBILITY OF LIQUEFIED HYDROCARBON GASES AT LOW TEMPERATURES.
MORLET,J.
REV. INST. FRANC. PETROLE ANN. COMBUST. LIQUIDES VOL. 18, 127-43 (1963)
CA 59 2181D A3 B2 C7 D E1 F7 G1 63
•LIQUID, •METHANE, •ETHANE, •PROPANE, •DENSITY, A3 B2 C7 D E1
•BUTANE, •LIQUID, •METHANE, ETHANE, PROPANE, GASEOUS, •SOLUTION, SOLUBILITY

18831 NOMOGRAMS FOR CALCULATION OF FREON VISCOSITY.
NIKUL'SHIN,R.K. ZAINULINA,M.S.
TR. ODESSK. TEKHNOL. INST. PISHCHEVOI I KHOLODIL'N. PROM VOL. 10, 125-30 (1961)
CA 59 4564C A3 B7 C8 D E2 F7 G1 61
FREON, •VISCOSITY, •GASEOUS, •LIQUID, •REFRIGERANT, NOMOGRAM

18832 THERMAL CONDUCTIVITY OF SATURATED HYDROCARBONS AT VARIOUS TEMPERATURES AND HIGH PRESSURES.
NAZIEV,YA.M. GOLUBEV,I.F.
IZV. AKAD. NAUK AZERB. SSR, SER. FIZ.-MAT. I TEKHN. NAUK, VCL. 196. NO. 6, 113-18 (1962)
CA 59 4573D A3 B7 C8 D E3 F7 G1 62
•THERMAL CONDUCTIVITY, •HYDROCARBON, •METHANE, •GASEOUS, •ETHANE, LAW OF CORRESPONDING STATES, •PROPANE, •BUTANE

18837 KRITIK DER ELEKTRISCHEN DIFFERENTIALMETHODE ZUR MESSUNG VON CV AN GASEN. IV. MESSUNGEN. DIE NORMIERUNG MIT ARGON. CRITICISM OF THE ELECTRICAL DIFFERENTIAL METHOD OF MEASURING CV WITH GASES. IV. MEASUREMENTS. THE STANDARDIZATION WITH ARGON.
TRAUTZ,M. KAUFMAN,F.
ANN. PHYSIK VOL. 5, 581-605 (1930) 1 FIG 7 TAB 15 REF
A3 B3 C8 D1 E1 F7 G1 30
•AIR, •ARGON, •METHANE, •HYDROGEN, •CARBON DIOXIDE, •INORGANIC FLUID, SULFUR DIOXIDE, •GASEOUS, •SPECIFIC HEAT

18838 KRITIK DER ELEKTRISCHEN DIFFERENTIALMETHODE ZUR MESSUNG VON CV AN GASEN. CRITIQUE OF THE ELECTRIC DIFFERENTIAL METHOD FOR MEASURING CV IN GASES.
TRAUTZ,M. TRAUTZ,O.
ANN. PHYSIK VOL. 86, NO. 9, 1-65 (1928) 10 FIG 2 TAB 19 REF
A3 B3 C8 D1 E1 F7 G1 28
•AIR, •NITROGEN, •OXYGEN, •CARBON DIOXIDE, •HYDROGEN, •METHANE, •ORGANIC FLUID, BENZENE, ETHYL ACETATE, ACETONE, •ARGON, •GASEOUS, •SPECIFIC HEAT

18839 THE SECOND VIRIAL COEFFICIENT FOR GASES, A CRITICAL COMPARISON BETWEEN THEORETICAL AND EXPERIMENTAL RESULTS.
MARGENAU,HENRY
PHYS. REV. VOL. 36, 1782-90 (DEC 1930) 9 FIG 2 TAB 16 REF
A3 B1 C8 D3 E3 F6 G1 30
•NECN, •ARGON, •HELIUM, NITROGEN, •HYDROGEN, •OXYGEN, •CARBON DIOXIDE, •AMMONIA, •GASEOUS, •EQUATION OF STATE, SECOND VIRIAL COEFFICIENT, EQUATION, •WATER

18840 MELTING POINT OF CRYSTALLINE ARGON.
HENKEL,J.H.; [illegible]
BULL. AM. PHYS. SOC. VOL. 1, 258 (1956)
A3 B1 C7 D2 E2 F6 G1 56
•ARGON, •LIQUID, EQUATION OF STATE, MELTING POINT, FREE ENERGY

18841 VISCOSITY AND SELF-DIFFUSION IN LIQUIDS.
MCLAUGHLIN,E.
TRANS. FARADAY SOC. VOL. 55, 28-38 (1959) 2 FIG 3 TAB 38 REF
A3 B1 C7 D1 E3 F7 G1 59
•ARGON, •NITROGEN, •CARBON MONOXICE, •METHANE, •ORGANIC FLUID, BENZENE, •INORGANIC FLUID, CARBON TETRACHLORICE, •LIQUID, •VISCOSITY, •TRANSPORT PROPERTY, SELF-DIFFUSION, DIFFUSION COEFFICIENT, EQUATION

18842 THERMAL CONDUCTIVITY OF SIMPLE MOLECULES IN THE CONDENSED STATE.
HORROCKS,J.K. MCLAUGHLIN,E.
TRANS. FARADAY SOC. VOL. 56, 206-12 (1960) 1 FIG 1 TAB 21 REF
A3 B1 C7 D1 E3 F7 G1 60
•ARGON, •NITROGEN, •CARBON MONOXIDE, •METHANE, •ORGANIC FLUID, BENZENE, CARBON TETRACHLORIDE, •INORGANIC FLUID, •LIQUID, •THERMAL CONDUCTIVITY, EQUATION, CALCULATION

18843 DIE MESSUNG DER WARMELEITUNG IN GASEN. MEASUREMENT OF THE HEAT CONDUCTIVITY OF GASES.
TRAUTZ,M. ZUNDEL,A.
ANN. PHYSIK VOL. 17, NO. 4, 345-75 (JUN 1933) 1 FIG 17 TAB 45 REF
A3 B3 C8 D1 E1 F7 G1 33
•AIR, •CARBON DIOXIDE, •CARBON MONOXIDE, •METHANE, •HYDROGEN, •OXYGEN, •PROPANE, •ARGON, •GASEOUS, •THERMAL CONDUCTIVITY

18844 THE SPECIFIC HEAT OF LIQUID HELIUM FROM 1.5 DEGREES K DOWN TO 0.4 DEGREES K.
KEESOM,W.H. MESTMIJZE,W.K.
PHYSICA VOL. 8, NO. 9, 1044 (NOV 1941)
A3 B1 C4 D3 E1 F6 G1 41
•HELIUM, •LIQUID, SATURATED LIQUID, •SPECIFIC HEAT, TEMPERATURE EFFECT, EQUATION

18845 THE MOLECULAR THEORY OF SURFACE ENERGY, THE SURFACE ENERGY OF THE LIQUEFIED INERT GASES.
BRADLEY,R.S.
PHIL. MAG. VOL. 11, 846-49 (1931) 8 REF
A3 B1 C5 D1 E3 F6 G1 31
•ARGON, •HELIUM, •LIQUID, •SURFACE TENSION, SURFACE ENERGY, CALCULATION, EQUATION

18846 DIE UBERFUHRUNG DES ARGONS IN DEN FLUSSIGEN UND FESTEN ZUSTAND. THE CONVERSION OF ARGON IN THE LIQUID AND SOLID STATE.
OLSZEWSKI,K.
Z. PHYSIK. CHEM. VOL. 16, 380-84 (1895) 3 TAB
A3 B3 C7 D1 E1 F7 G1 95
•ARGON, •CRITICAL CONSTANTS, •LIQUID, •VAPOR PRESSURE, •BOILING TEMPERATURE, MELTING TEMPERATURE

18847 DIE UBERFUHRUNG DES ARGONS IN DEN FLUSSIGEN UND FESTEN ZUSTAND. THE CONVERSION OF ARGON IN THE LIQUID AND SOLID STATE.
OLSZEWSKI,K.
Z. PHYSIK. CHEM. VOL. 16, 380-84 (1895) 3 TAB
A3 B3 C7 D1 E1 F7 G1 95
•ARGON, •CRITICAL CONSTANTS, •LIQUID, •VAPOR PRESSURE, •BOILING TEMPERATURE, MELTING TEMPERATURE

18848 NOTE ON VAPOUR PRESSURES OF MONATOMIC SUBSTANCES.
EGERTON,A.C.
PHIL. MAG. VOL. 48, 1048-54 (1924) 3 TAB
A3 B1 C7 D1 E3 F6 G1 24
•ARGON, •SOLIDIFIED GAS, •VAPOR PRESSURE, EQUATION, CALCULATION, TEMPERATURE EFFECT

18851 A CORRESPONDING STATES TREATMENT OF THE SPEED OF SOUND IN SIMPLE LIQUIDS.
HAMANN,S.D.
AUSTRALIAN J. CHEM. VOL. 13, 325-31 (1960) 1 FIG 2 TAB 23 REF
A3 B1 C1 D1 E3 F7 G1 60
•ARGON, •NITROGEN, •OXYGEN, •METHANE, •HELIUM, •HYDROGEN, •INORGANIC FLUID, CARBON TETRACHLORIDE, •LIQUID, •VELOCITY OF SOUND, •REDUCED VARIABLE, LAW OF CORRESPONDING STATES, INTERMOLECULAR FORCE

18852 THE EQUATION OF STATE OF SOLIDS AT LOW TEMPERATURE.
BERNARDES,N. SWENSON,C.A.
IOWA STATE UNIV., INST. FOR ATOMIC RES., AMES, REPT. NO. IS-359 (OCT 1961) 64 PP 81 REF (TITLE IN U.S. GOV. RES. REPTS. VOL. 38, NO. 10, 5-28, MAY 1963)
A3 B1 C1 D3 E2 F8 G5 63
•EQUATION OF STATE, •SOLIDIFIED GAS, XENON, •ARGON, •NEON, ZERO POINT ENERGY, •RARE GAS,
A3 B1 C1 D1 E2
•EQUATION OF STATE, LENNARD-JONES FUNCTION, •HELIUM, HELIUM 3, HELIUM 4, •HYDROGEN, •NEON, •ARGON, KRYPTON, XENON, •SOLIDIFIED GAS, •RARE GAS,
A2 B1 C1 D1 E2
•LITHIUM, •SODIUM, •POTASSIUM, •RUBIDIUM, •CESIUM, ZERO POINT ENERGY

18917 INFLUENCE OF MOLECULAR QUADRUPOLE MOMENTS ON THE SECOND VIRIAL COEFFICIENT.
ORCUTT,R.H.
J. CHEM. PHYS. VOL. 39, NO. 3, 605-08 (1963)
CA 59 4559H A3 B1 C8 D E3 F6 G1 63
•EQUATION OF STATE, VIRIAL COEFFICIENT, •GASEOUS, SECOND VIRIAL COEFFICIENT, •VISCOSITY, •ETHYLENE, •HYDROGEN, •NITROGEN, •CARBON MONOXIDE, •CARBON DIOXIDE, INTERMOLECULAR FORCE, QUADRAPOLE MOMENT

18918 VAPOR PRESSURE OF A MONATOMIC CRYSTAL.
SALTER,L.S.
TRANS. FARADAY SOC. VOL. 59, 657-66 (1963)
CA 59 4561C A3 B1 C7 D E3 F7 G1 63
•VAPOR PRESSURE, •ARGON, KRYPTON, •RARE GAS, •SOLIDIFIED GAS, ZERO POINT ENERGY

18920 CALCULATIONS OF LIQUID-FREON VISCOSITY.
NIKUL'SHIN,R.K. ZAINULINA,N.S.
TR. ODESSK. TEKHNOL. INST. PISHCHEVOI I KHOLODIL'N. PROM. VOL. 11, 108-18 (1962)
CA 59 4564A A3 B7 C8 D E1 F7 G1 62
•REFRIGERANT, FREON, •LIQUID, •VISCOSITY

18921 DETERMINATION OF THE VISCOSITY OF FREON VAPORS.
NIKUL'SHIN,R.K. ZAINULINA,N.S.
TR. ODESSK. TEKHNOL. INST. PISHCHEVOI I KHOLODIL'N. PROM. VOL. 11, 91-107 (1962)
CA 59 4564B A3 B7 C8 D E1 F7 G1 62
•REFRIGERANT, •GASEOUS, •VISCOSITY, FREON, SATURATED VAPOR

18924 THERMAL CONDUCTIVITY OF LIQUID CARBON DIOXIDE ALONG THE SATURATION CURVE INCLUDING THE CRITICAL STATE.
AMIRKHANOV,KH. ADAMOV,A.P. LEVINA,L.N.
TEPLO I MASSOPERENOS, PERVOE VSES. SOVESHCH., MINSK VOL. 1, 105-08 (1961)
CA 59 4573A A3 B7 C8 D E1 F7 G1 61
•CARBON DIOXIDE, •LIQUID, SATURATED LIQUID, •THERMAL CONDUCTIVITY, •CRITICAL REGION

18947 ON THE MEASUREMENT OF VERY LOW TEMPERATURES. XIII. DETERMINATIONS WITH THE HYDROGEN THERMOMETER.
ONNES,H.K. BRAAK,C.
COMMUNS. PHYS. LAB. UNIV. LEIDEN NO. 95E (1906) 1 FIG 2 TAB 1 REF (TRANS. FROM, VERSLAG. GEWONE VERGADER. AFDEL. NATUURK. KONINKL. NED. AKAD. WETENSCHAP., 349-63, OCT 1906)
A3 B1 C6 D1 E1 F7 G1 C6
•HYDROGEN, •LIQUID, •VAPOR PRESSURE, MELTING POINT

18948 ON THE ANOMALY IN THE SPECIFIC HEAT OF LIQUID HELIUM.
KEESOM,W.H. KEESOM,A.P.
COMMUNS. KAMERLINGH CANES LAB. UNIV. LEIDEN NO. 221D, 19-26 (1932) 3 FIG 2 TAB 4 REF (REPR. FROM, KONINKL. NED. AKAD. WETENSCHAP., PROC. VOL. 35, 736, 1932)
A3 B1 C5 D1 E1 F7 G1 32
•HELIUM, HELIUM 4, •LIQUID, •SPECIFIC HEAT, SATURATED LIQUID, ANOMALY, TEMPERATURE EFFECT, LAMBDA TEMPERATURE

18949 RESEARCHES ON THE JOULE-KELVIN EFFECT, ESPECIALLY AT LOW TEMPERATURES. I. CALCULATIONS FOR HYDROGEN.
DALTON,J.P.
COMMUNS. PHYS. LAB. UNIV. LEIDEN NO. 109A (1909) 3 FIG 2 TAB 23 REF (TRANS. FROM, VERSLAG. GEWONE VERGADER. AFDEL. NATUURK. KONINKL. NEC. AKAD. WETENSCHAP., 1057-67, MAR 1909)
A3 B1 C2 D1 E1 F7 G1 59
•HYDROGEN, •GASEOUS, •JOULE-THOMSON EFFECT, PRESSURE EFFECT

18951 THE VISCOSITY OF LIQUEFIED GASES. IX. PRELIMINARY DETERMINATION OF THE VISCOSITY OF LIQUID HYDROGEN.
VERSCHAFFELT,J.E. NICAISE,CH.
COMMUNS. PHYS. LAB. UNIV. LEIDEN NO. 151G, 67-71 (1917) 4 REF (TRANS. FROM, VERSLAG GEWONE VERGADER. AFDEL. NATUURK. KONINKL. NEC. AKAD. WETENSCHAP VOL. 25, 1224-28, FEB 1917)
A3 B1 C6 D1 E1 F7 G1 17
•HYDROGEN, •LIQUID, •VISCOSITY

18978 EQUATION OF STATE PREDICTION OF THERMODYNAMIC PROPERTIES OF CARBON DIOXIDE.
MARTIN,J.J.
J. CHEM. ENG. DATA VOL. 8, NO. 3, 311-14 (JUL 1963) 2 FIG 1 TAB 10 REF
A3 B1 C2 D1 E3 F6 G1 63
•CARBON DIOXIDE, •CRITICAL REGION, •EQUATION OF STATE, •DENSITY, •ENTHALPY, •ENTROPY, •GASEOUS, PRESSURE EFFECT

18979 EQUATIONS OF STATE AND COMPRESSIBILITIES FOR GASEOUS CARBON DIOXIDE IN THE RANGE 0 DEGREES TO 600 DEGREES C AND 0 TO 150 ATMOSPHERES.
VAN HUFF,N.E. HOUGHTON,G. COULL,J.
J. CHEM. ENG. DATA VOL. 8, NO. 3, 336-40 (JUL 1963) 1 FIG 1 TAB 17 REF
A3 B1 C2 D1 E3 F6 G1 63
•CARBON DIOXIDE, •GASEOUS, •EQUATION OF STATE, COMPRESSIBILITY FACTOR, •PVT DATA

18980 HEAT OF SUBLIMATION OF MOLECULAR CRYSTALS. A CATALOG OF MOLECULAR STRUCTURE INCREMENTS.
BONDI,A.
J. CHEM. ENG. DATA VOL. 8, NO. 3, 371-81 (JUL 1963) 20 TAB 53 REF
A3 B1 C7 D1 E2 F6 G1 63
•ORGANIC FLUID, •HEAT OF SUBLIMATION, •METHANE, •ETHANE, •PROPANE, MELTING TEMPERATURE, •HYDROCARBON, PARAFFIN CLASS

18994 THE VISCOSITY OF ARGON-HELIUM MIXTURES.
IWASAKI,H. KESTIN,J.
BROWN UNIV., PROVIDENCE, R.I. REPT. NO. BRN-4-P (APR 1963) CONTR. NO. NONR-3623(00) 53 PP 13 REF
NASA N63 16407 A3 B1 C2 D E1 F3 G5 63
•GASEOUS MIXTURE, •ARGON, •HELIUM, •VISCOSITY, •BINARY SYSTEM

18995 THE VISCOSITY OF CARBON DIOXIDE IN THE NEIGHBORHOOD OF THE CRITICAL POINT.
KESTIN,J. WHITELAW,J.H. ZIEN,T.F.
BROWN UNIV., PROVIDENCE, R.I., REPT. NO. BRN-5-P (APR 1963) CONTR. NO. NONR 3623(00) 46 PP 15 REF
NASA N63 16408 A3 B1 C2 D E1 F3 G5 63
•GASEOUS, •CARBON DIOXIDE, •VISCOSITY, •CRITICAL REGION

19072 THE VISCOSITY OF LIQUID HELIUM II BETWEEN 0.75 DEGREES K AND THE LAMBDA POINT.
WOODS,A.D.B. HOLLIS HALLETT,A.C.
CAN. J. PHYS. VOL. 41, 596-609 (1963)
CA 58 13159E A3 B1 C4 D1 E1 F7 G1 63
•HELIUM, HELIUM II, •LIQUID, •VISCOSITY, TEMPERATURE EFFECT

19117 LIQUID HELIUM II.
OSBORNE,D.V. (UNIV. ST. ANDREW'S, SCOT.)
EXPERIMENTAL CRYOPHYSICS, 310-27 (HOARE,F.E., JACKSON, L.C., KURTI,N. EDS.) BUTTERWORTHS, LONDON (1961)
CA 59 11968F A3 B1 C4 D3 E2 F7 G2 61
•HELIUM, HELIUM II, •LIQUID, •SPECIFIC HEAT, •DENSITY, •VISCOSITY, •VELOCITY OF SOUND, •PHYSICAL PROPERTY, SOUND ABSORPTION, SATURATED LIQUID, TEMPERATURE EFFECT, REVIEW, LAMBDA TRANSITION

19119 SUPERCOMPRESSIBILITY FACTORS FOR HELIUM-NITROGEN MIXTURES.
MILLER,J.E. STROUD,L. (U.S. BUR. OF MINES, AMARILLO, TEX.)
U.S. BUR. MINES, REPT. INVEST. NO. VOL. 6192, (1963) 242 PP
CA 58 11971E A3 B1 CC D E1 F8 G6 63
•HELIUM, •NITROGEN, •GASEOUS MIXTURE, •BINARY SYSTEM, •PVT DATA, COMPRESSIBILITY FACTOR, CONCENTRATION EFFECT

19121 VAPOR PRESSURES OF ISOTOPIC MOLECULES.
BIGELEISEN,JACOB (BROOKHAVEN NATL. LAB., UPTON, N.Y.)
J. CHIM. PHYS. VOL. 60, NO. 1-2, 35-43 (1963)
CA 58 11972E A3 B1 C6 D E1 F7 G1 63
•NEON, •LIQUID, •ISOTOPE, •VAPOR PRESSURE, VAPOR PRESSURE RATIO

19124 JOULE-THOMSON COEFFICIENTS FOR ETHANE.
TSATURYANTS,A.B. MAMEDOV,A.R. EIVAZOVA,R.G.
DOKL. AKAD. NAUK AZERB. SSR VOL. 18, NO. 11, 23-28 (1962)
CA 58 12016H A3 B7 C2 D E1 F7 G1 62
•ETHANE, •GASEOUS, •JOULE-THOMSON COEFFICIENTS, TEMPERATURE EFFECT, PRESSURE EFFECT

19168 MEASUREMENT OF THE LATTICE CONSTANTS OF NEON ISOTOPES IN THE TEMPERATURE RANGE 4-24 DEGREES K.
BOLZ,L.H. MAUER,F.A. (NBS, WASHINGTON, D.C.)
ADVANCES IN X-RAY ANALYSIS VOL. 6, 242-49 (PROC. 11TH CONF. ON APPLICATION OF X-RAY ANALYSIS, 1962) PLENUM PRESS, N.Y. (1963)
3 FIG 2 TAB 10 REF
A3 B1 C5 D1 E1 F6 G2 62
•NEON, •SOLIDIFIED GAS, LATTICE PARAMETER, •ISOTOPE, •EXPANSIVITY, THERMAL EXPANSION, •DENSITY, DIFFRACTION, X-RAY

19175 PARTITION FUNCTIONS FOR NORMAL LIQUIDS AND MOLTEN SALTS.
BLOMGREN,G.E. (UNION CARBIDE CORP., CLEVELAND, OHIO)
ANN. N. Y. ACAD. SCI. VOL. 79, ART. 11, 781-85 (1960) 4 FIG 2 TAB 19 REF
MF NO. 197-G A3 B1 C7 D3 E3 F6 G1 60
•ARGON, •METHANE, •NITROGEN, •LIQUID, •VISCOSITY, CALCULATION, PARTITION FUNCTION, TEMPERATURE EFFECT

19176 EXPERIMENTAL INVESTIGATION OF THE THERMAL CONDUCTIVITY OF ARGON.
TSEDERBERG,N.V. POPOV,V.N. MOROZOVA,N.A.
TEPLOENERGETIKA VOL. 7, NO. 6, 82-86 (1960) 5 FIG 5 TAB
MF NO. 197-M A3 B7 C7 D1 E1 F7 G1 60
•ARGON, •GASEOUS, •THERMAL CONDUCTIVITY, PRESSURE EFFECT

19179 HEAT CONDUCTIVITY AND CHEMICAL REACTIONS IN GASES.
PRIGOGINE,I. WAELBROECK,F.
PROC. CONF. THERMODYN. TRANSPORT PROPERTIES FLUIDS, LONDON, 1957, 128-32 (1958) 3 FIG 8 REF
MF NO. 197-J A3 B1 C2 D3 E1 F7 G2 58
•HELIUM, •ARGON, •HYDROGEN, •OXYGEN, •GASEOUS, •THERMAL CONDUCTIVITY, PRESSURE EFFECT

19180 VISCOSITY OF LIQUID HE II.
TOUGH,J.T. MCCORMICK,W.D. DASH,J.G. (UNIV. OF WASHINGTON, SEATTLE)
PHYS. REV. VOL. 132, NO. 6, 2373-78 (DEC 1963) 6 FIG 2 TAB 23 REF
A3 B1 C5 D1 E1 F6 G1 63
•HELIUM, HELIUM-4, HELIUM II, •LIQUID, •VISCOSITY, TEMPERATURE EFFECT, •DENSITY

19184 SUR LA DENSITE DE L'AIR ATMOSPHERIQUE LIQUIDE ET DE SES COMPOSANTS, ET SUR LE VOLUME ATOMIQUE DE L'OXYGENE ET DE L'AZOTE. THE DENSITY OF LIQUID ATMOSPHERIC AIR AND ITS COMPONENTS, AND THE ATOMIC VOLUME OF OXYGEN AND NITROGEN.
WROBLEWSKI,S.
COMPT. REND. VOL. 102, 1010-12 (1886) 1 TAB
MF NO. 198-C A3 B2 C7 D1 E1 F7 G1 86
•OXYGEN, •LIQUID, SATURATED LIQUID, •DENSITY, •AIR,
A3 B2 C7 D1 E1
•NITROGEN, •LIQUID, •VAPOR PRESSURE, •DENSITY, •SATURATED LIQUID

19185 SUR LA TEMPERATURE D'EBULLITION DE L'OXYGENE, DE L'AIR, DE L'AZOTE ET DE L'OXYDE DE CARBONE SOUS LA PRESSION ATMOSPHERIQUE. THE BOILING TEMPERATURE OF OXYGEN, AIR, NITROGEN AND CARBON MONOXIDE AT ATMOSPHERIC PRESSURE.
WROBLEWSKI,S.
COMPT. RENC. VOL. 98, 982-85 (1884) 1 TAB
MF NO. 198-C A3 B2 C7 D1 E1 F7 G1 84
•OXYGEN, •LIQUID, •BOILING TEMPERATURE, •VAPOR PRESSURE, •CRITICAL CONSTANT,
A3 B2 C7 D1 E1
•AIR, •NITROGEN, •CARBON MONOXIDE, •LIQUID, •BOILING TEMPERATURE

19186 FURTHER EXPERIMENTS WITH LIQUID HELIUM. BB. PRELIMINARY DETERMINATIONS OF THE SPECIFIC HEAT OF LIQUID HELIUM.
DANA,L.I. CANES,F.K.
PROC. ACAD. SCI. AMSTERDAM VOL. 29, 1061-68 (1926) 1 FIG 2 TAB 3 REF (REPR. FROM COMMUNS. PHYS. LAB. LEIDEN NO. 179D)
MF NO. 197-N A3 B1 C5 D1 E1 F6 G1 26
•HELIUM, •LIQUID, SATURATED LIQUID, •SPECIFIC HEAT, TEMPERATURE EFFECT651 (PASI,J.F. ISAI,D.H. EDS.)
ACADEMIC PRESS, N.Y. (1562)
MF NO. 197-I A3 B1 C6 D1 E3 F6 G2 62
•ARGON, •LIQUID, •SPECIFIC HEAT, •VISCOSITY,
A3 B1 C6 D1 E3
•TRIPLE POINT, •BOILING POINT, •CRITICAL CONSTANTS, •HEAT OF FUSION, •HEAT OF VAPORIZATION, •LIQUID, •DENSITY, •NEON, •ARGON, •RARE GAS, KRYPTON, XENON, •HEAT OF SUBLIMATION, CHLORINE,
A3 B1 C6 D1 E3
•TRIPLE POINT, •BOILING TEMPERATURE, •CRITICAL CONSTANTS, •HEAT OF FUSION, •HEAT OF VAPORIZATION, •LIQUID, •DENSITY, •HEAT OF SUBLIMATION, •PARAHYDROGEN, •HYDROGEN, •HYDROGEN DEUTERIDE, •DEUTERIUM, ORTHODEUTERIUM, •VAPOR PRESSURE

19187
19188
19189 See Appendix

19205 SOUND ABSORPTION AND VELOCITY MEASUREMENTS IN OXYGEN.
SHIELDS,F.D. LEE,K.P.
MISSISSIPPI UNIV., OXFORD, TECH. REPT. (OCT 1962) CONTR. NO. NONR-3078(00) 4 PP 2 FIG 7 REF
ASTIA AD 286 957 A3 B1 C2 D3 E1 F5 G5 62
•OXYGEN, •GASEOUS, •VELOCITY OF SOUND, ARGON, SOUND ABSORPTION, •PHYSICAL PROPERTY

19278 THE DIPOLE MOMENTS AND STRUCTURES OF OZONE, SILICOBROMOFORM AND DICHLOROGERMANE.
LEWIS,G.L. SMYTH,C.P. (PRINCETON UNIV.)
J. AM. CHEM. SOC. VOL. 61, 3063-66 (1939) 2 TAB 18 REF
A3 B1 C7 D1 E1 F6 G1 39
•OXYGEN, •OZONE, •LIQUID MIXTURE, •BINARY SYSTEM, •DIELECTRIC CONSTANT, •DENSITY

19280 MEASUREMENTS ON THE VISCOSITY OF NEON, HYDROGEN, DEUTERIUM AND HELIUM AS A FUNCTION OF THE TEMPERATURE, BETWEEN ROOM TEMPERATURE AND LIQUID HYDROGEN TEMPERATURES.
VAN ITTERBEEK,A. VAN PAEMEL,O. (NATUURKUNDIG LAB., LEUVEN, BELGIUM)
PHYSICA VOL. 7, NO. 3, 265-72 (MAR 1940) 2 FIG 7 TAB 7 REF
A3 B1 C6 D1 E1 F6 G1 40
•NEON, •HYDROGEN, •DEUTERIUM, •HELIUM, •GASEOUS, •VISCOSITY, TEMPERATURE EFFECT, ARGON

19286 THE SUTHERLAND VISCOSITY CONSTANT AND ITS RELATION TO THE MOLECULAR POLARIZATION.
KEYES,F.G. (MIT, CAMBRIDGE)
. . PHYSIK. CHEM. (LEIPZIG) VOL. 129, 709-14 (1927) 3 FIG 9 REF
MF NO. 198-N A3 B1 C8 D3 E2 F7 G1 27
•HELIUM, •ARGON, •NEON, •RARE GAS, KRYPTON, XENON, •CARBON MONOXIDE, •NITROGEN, •OXYGEN, •METHANE, •HYDROGEN, •GASEOUS, •VISCOSITY, SUTHERLAND CONSTANT

19287 LA TENSION DE VAPEUR ET LA CHALEUR DE VAPORISATION AUX BASSES TEMPERATURES. VAPOR TENSION AND HEAT OF VAPORIZATION AT LOW TEMPERATURES.
VERSCHAFFELT,J.E.
ARCH. NEERLAND. SCI. IIIA VOL. 8, 109-35 (1924) 1 FIG 3 TAB 28 REF
MF NO. 198-C A3 B2 C5 D1 E2 F7 G1 24
•VAPOR PRESSURE, •HEAT OF VAPORIZATION, WATER, •ARGON, •HYDROGEN, •SOLIDIFIED GAS, •HEAT OF SUBLIMATION, •SPECIFIC HEAT,
A3 B2 C4 D2 E2
•VAPOR PRESSURE, •LIQUID, •HEAT OF VAPORIZATION, •HELIUM

19289 THE VELOCITY OF SOUND AT REDUCED PRESSURES.
SMITH,P.W.JR.
J. ACOUST. SOC. AM. VOL. 23, NO. 6, 715 (NOV 1951) 1 FIG 3 REF
A3 B1 C8 D1 E2 F6 G1 51
•AIR, •NITROGEN, •OXYGEN, •CARBON DIOXIDE, •METHANE, •GASEOUS, •VELOCITY OF SOUND, PRESSURE EFFECT

19294 ISOTHERMS OF METHANE AT PRESSURES FROM 34 ATMOSPHERES TO 258 ATMOSPHERES AND TEMPERATURES FROM 0 DEGREES C TO 150 DEGREES C.
ALTMAN,ALBERT
MARYLAND UNIV., COLLEGE PARK, MASTER THESIS (1958) 51 PP 7 FIG 6 TAB 18 REF
MF NO. 200-L A3 B1 C8 D1 E1 F9 G7 58
•METHANE, •GASEOUS, •PVT DATA, COMPRESSIBILITY FACTOR, ISOTHERM, •DENSITY, VIRIAL COEFFICIENT, SECOND VIRIAL COEFFICIENT, THIRD VIRIAL COEFFICIENT

19297 DETERMINATION DU COEFFICIENT DE VISCOSITE DE L'AZOTE COMPRIME JUSQU'A 5000 BARS. DETERMINATION OF THE VISCOSITY OF NITROGEN COMPRESSED TO 5000 BARS.
VERHESSE,J. JOHANNIN,F. VODAR,B.
COMPT. REND. VOL. 256, 3016-19 (1963) 2 FIG 2 TAB 6 REF
CA 59 1112E A3 B2 C8 D1 E1 F7 G1 63
•NITROGEN, •GASEOUS, •VISCOSITY, HIGH PRESSURE, PRESSURE EFFECT

19301 KRITIK DER ELEKTRISCHEN DIFFERENTIALMETHODE ZUR MESSUNG VON CV AN GASEN. VI. DIE SPEZIFISCHE WARME VON ARGON UND LUFT.
CRITICISM OF THE ELECTRICAL DIFFERENTIAL METHOD OF MEASURING CV OF GASES. VI. THE SPECIFIC HEATS OF ARGON AND AIR.
TRAUTZ,MAX HEICHLE,A. (PHYSIKALISCH-CHEMISCHEN INSTITUT DER UNIVERSITAT HEIDELBERG)
ANN. PHYSIK VOL. 22, NO. 6, 513-24 (APR 1935) 3 FIG 6 TAB 19 REF
A3 B3 C8 D1 E1 F7 G1 35
•ARGON, •AIR, •GASEOUS, •SPECIFIC HEAT, ISOCHORE

19306 THE VELOCITY OF SOUND IN AIR, NITROGEN AND ARGON.
SMITH,D.H. HARLOW,R.G. (WOOLWICH POLYTECHNIC, LONDON)
BRIT. J. APPL. PHYS. VOL. 14, NO. 2, 102-06 (1963) 6 FIG 3 TAB 14 F
CNRS 24-3-13485 A3 B1 C2 D1 E1 F7 G1 63
•VELOCITY OF SOUND, •AIR, •NITROGEN, •ARGON, •GASEOUS, SOUND ABSORPTION, •PHYSICAL PROPERTY, FREQUENCY EFFECT

19308 QUANTUM-MECHANICAL CALCULATION OF THE THIRD VIRIAL COEFFICIENT OF HE4.
LARSEN,S.Y. (NBS, WASHINGTON, D.C.)
PHYS. REV. VOL. 130, 1426-40 (1963) 7 FIG 6 TAB 26 REF
CA 58 13156M A3 B1 C5 D1 E3 F6 G1 63
•HELIUM, HELIUM-4, •GASEOUS, •EQUATION OF STATE, SECOND VIRIAL COEFFICIENT, THIRD VIRIAL COEFFICIENT, CALCULATION, QUANTUM EFFECT

19325 KINETIC THEORY OF DENSE FLUIDS. XIV. EXPERIMENTAL AND THEORETICAL STUDIES OF THERMAL CONDUCTIVITY IN LIQUID AR, KR, XE, AND CH4.
IKENBERRY,L.C. RICE,S.A.
J. CHEM. PHYS. VOL. 39, NO. 6, 1561-71 (1963)
CA 59 8136B A3 B1 C7 D E1 F6 G1 63
•THERMAL CONDUCTIVITY, •METHANE, •ARGON, KRYPTON, XENON, •RARE GAS, •LIQUID, •TRANSPORT PROPERTY, SELF DIFFUSION

19373 DIFFERENCE IN THE PRESSURE OF THE SATURATED VAPOR OF THE ISOTOPES OF KRYPTON AND XENON.
GRIGOR'EV,V.N.
ZHUR. FIZ. KHIM. VOL. 36, 1779-81 (1962) 2 TAB 10 REF
A3 B7 C7 D1 E1 F7 G1 62
•RARE GAS, XENON, KRYPTON, •ISOTOPE, •BOILING TEMPERATURE, •VAPOR PRESSURE, DEBYE CONSTANT, SATURATED LIQUID, •LIQUID, VAPOR PRESSURE RATIO

19410 NEW GENERAL FORMULA FOR VAPOR PRESSURE APPLICABLE TO LIQUIDS OF VARIOUS COMPOSITION.
MEL'NICHENKO,N.I. (AUTOMECH. INST., MOSCOW)
INZH.-FIZ. AKAD. NAUK BELORUS. SSR VOL. 6, NO. 7, 50-53 (1963)
CA 59 10778C A3 B7 C1 D1 E3 F7 G1 63
•VAPOR PRESSURE, •LIQUID, •HYDROGEN, •METHANE, •OXYGEN, •HELIUM, •CARBON DIOXIDE, •AMMONIA, •ORGANIC FLUID

19414 GAS-LIQUID CRITICAL TEMPERATURES OF BINARY MIXTURES. II.
JONES,I.W. ROWLINSON,J.S. (IMP. COLL. SCI. TECHNOL., LONDON)
TRANS. FARADAY SOC. VOL. 59, NO. 488, 1702-08 (1963)
CA 59 10816E A3 B1 C1 D E F7 G1 63
•GASEOUS MIXTURE, •BINARY SYSTEM, •CRITICAL CONSTANT, •ARGON, •NITROGEN, •OXYGEN, •CARBON MONOXIDE, •METHANE, CRITICAL TEMPERATURE

19443 SUR LA TENSION SUPERFICIELLE ET LE MODELE CELLULAIRE DE L'ETAT LIQUIDE. SURFACE TENSION AND THE CELL MODEL OF THE LIQUID STATE.
PRIGOGINE,I. SARAGA,L. (UNIVERSITE LIBRE DE BRUXELLES, LAB. DE CHIM. PHYS., UNIVERSITE DE PARIS)
J. CHIM. PHYS. VOL. 49, 399-407 (1952) 8 FIG 3 TAB 11 REF
MF NO. 192-K A3 B2 C7 D1 E2 F7 G1 52
•LIQUID, •SURFACE TENSION, •ARGON, •NITROGEN, •OXYGEN, •NEON, •ORGANIC FLUID, METHYL CHLORIDE, BENZENE, CHLORINE, CARBON TETRACHLORIDE, SURFACE ENERGY, CALCULATION, •INORGANIC FLUID

19445 DIE ZWEITEN VIRIALKOEFFIZIENTEN VON ARGON, KRYPTON, XENON, STICKSTOFF UND KOHLENDIOXYD IM TEMPERATURBEREICH VON 0 BIS 1200 GRADEN C. SECOND VIRIAL COEFFICIENTS OF ARGON, KRYPTON, XENON, NITROGEN, CO2 IN THE 0 DEGREE TO 1200 DEGREES C TEMPERATURE RANGE.
THOMAS,W.
Z. PHYSIK VOL. 147, 92-98 (1957) 5 TAB 31 REF
MF NO. 199-G A3 B3 C8 D1 E3 F7 G1 57
•ARGON, •NITROGEN, •CARBON DIOXIDE, •RARE GAS, KRYPTON, XENON, •GASEOUS, INTERMOLECULAR FORCE, LENNARD-JONES FUNCTION, •EQUATION OF STATE, SECOND VIRIAL COEFFICIENT

19446 EQUATION OF STATE AND THERMAL CONDUCTIVITY OF GASES AT HIGH PRESSURES AND ELEVATED TEMPERATURES.
SAUREL,J. BERGERON,R. JOHANNIN,P. DAPOIGNY,J. KIEFFER,J. VODAR,B. (LAB. DES HAUTES PRESSIONS, MEUDON, FRANCE)
DISCUSSIONS FARADAY SOC., NO. 22, 64-69 (1956) 4 FIG 2 TAB 17 REF
MF NO. 193-F A3 B1 C8 D1 E1 F7 G1 56
•ARGON, •EQUATION OF STATE, •GASEOUS, HIGH PRESSURE, THIRD VIRIAL COEFFICIENT

19448 VORRICHTUNGEN ZUR FESTSTELLUNG DER SCHMELZKURVEN NIEDRIGSIEDENDER STOFFE. APPARATUS FOR DETERMINING THE FUSION CURVES OF LOW-BOILING SUBSTANCES.
SCHMOLKE
WARME VOL. 54, NO. 6 97-98 (1931) 2 TAB 4 REF
MF NO. 198-S A3 B3 C6 D1 E2 F7 G1 31
•MELTING CURVE, EQUATION, •HELIUM, •HYDROGEN, •NEON, •NITROGEN, •ARGON

19479 THE VISCOSITY OF ARGON-AMMONIA MIXTURES.
IWASAKI,H. KESTIN,J. NAGASHIMA,A.
BROWN UNIV., PROVIDENCE, R.I., REPT. NO. BRN-6-P (JUN 1963) CONTR. NO. 3623(00), 29 PP 6 REF (PROJ. SCUID)
NASA N63 19046 A3 B1 C6 D E1 F3 G5 63
•GASEOUS MIXTURE, •VISCOSITY, •AMMONIA, •ARGON

19480 THE THERMAL CONDUCTIVITY OF NITROGEN AND ARGON.
VINES,R.G. KEYES,F.G.
MASS. INST. TECHNOL., CAMBRIDGE, PROJ. SQUID, REPT. NO. MIT-34-P (JUL 1963) CONTR. NONR-3623(00) 25 PP 18 REF
NASA N63 18984 A3 B1 C2 D1 E2 F3 G5 63
•THERMAL CONDUCTIVITY, •GASEOUS, •NITROGEN, •ARGON, PRESSURE EFFECT

19613 THE P-V-T BEHAVIOR OF HYDROGEN-METHANE AND HYDROGEN-ETHANE MIXTURES.
SOLBRIG,C.W. ELLINGTON,R.T.
CHEM. ENG. PROGR. SYMP. SER. VOL. 59, NO. 44, 127-36 (1963)
CA 59 5791E A3 B1 C8 D E1 F6 G1 63
•GASEOUS MIXTURE, •PVT DATA, •EQUATION OF STATE, COMPRESSIBILITY FACTOR, •METHANE, •HYDROGEN, SECOND VIRIAL COEFFICIENT, •BINARY SYSTEM,
A3 B1 C8 D E1
•GASEOUS MIXTURE, •PVT DATA, •EQUATION OF STATE, COMPRESSIBILITY FACTOR, •ETHANE, •HYDROGEN, •BINARY SYSTEM

19617 A SEMICMPIRICAL FORMULA FOR THE VISCOSITY OF MULTICOMPONENT GAS MIXTURES.
SAXENA,S.C. GAMBHIR,R.S.
INDIAN J. PURE APPL. PHYS. VOL. 1, NO. 6, 208-15 (1963)
CA 59 5795H A3 B1 C8 D E F7 G1 63
•VISCOSITY, •GASEOUS MIXTURE, •HELIUM, •NEON, •ARGON, •NITROGEN, •OXYGEN, •CARBON DIOXIDE, •HYDROGEN, •METHANE, •CARBON MONOXIDE, •BINARY SYSTEM

19636 MOLLIER CHART FOR NITROGEN.
LIN,G.S. (CALIFORNIA RES. CORP., RICHMOND)
CHEM. ENG. PROGR. VOL. 59, NO. 11, 70-71 (NOV 1963) 1 FIG 2 TAB
A3 B1 C7 D3 E2 F6 G1 63
•NITROGEN, •ENTHALPY, PRESSURE-ENTHALPY DIAGRAM, •GASEOUS, •LIQUID

19645 THE VELOCITY OF SOUND IN LIQUID NORMAL AND PARA HYDROGEN AS A FUNCTION OF PRESSURE.
VAN ITTERBEEK,A. VAN DAEL,W. COPS,A.
PHYSICA VOL. 29, NO. 9, 965-73 (SEPT 1963) 5 FIG 7 TAB 9 REF
A3 B1 C6 D1 E1 F6 G1 63
•HYDROGEN, NORMAL HYDROGEN, •PARAHYDROGEN, •LIQUID, •VELOCITY OF SOUND, •DENSITY, •COMPRESSIBILITY, SPECIFIC HEAT RATIO, CALCULATION

19652 RESEARCH ON RHEOLOGIC AND THERMODYNAMIC PROPERTIES OF SOLID AND SLUSH HYDROGEN.
DWYER,R.F. COOK,G.A.
LINDE CO., TONAWANDA, N.Y., QUART. REPT. NO. 2 (DEC 1963) CONTR. NO. AF 33(657)-11098, 32 PP 7 FIG 8 TAB 22 REF
A3 B1 C6 D1 E2 F8 G5 63
NORMAL HYDROGEN, LIQUID, •GASEOUS, •SOLUTION, SOLUBILITY, •HELIUM,
A3 B1 C6 D1 E2
•PARAHYDROGEN, •LIQUID, •DENSITY, •HEAT OF FUSION, •MELTING CURVE,
A3 B1 C6 D1 E2
•HYDROGEN, NORMAL HYDROGEN, •DENSITY, •SOLIDIFIED GAS, •MELTING CURVE, •PHASE DIAGRAM

19659 SOME REMARKS ON EXPERIMENTS IN THE DENSE STATE.
MICHELS,A. (VAN DER WAALS LAB., GEMEENTE UNIV., AMSTERDAM)
NUOVO CIMENTO SUPPL. VOL. 9, NO. 1, 152-62 (1958) 15 FIG
A3 B1 C8 D3 E2 F7 G1 58
•NITROGEN, •ARGON, •GASEOUS, •THERMAL CONDUCTIVITY, •VISCOSITY, PRESSURE EFFECT, DENSITY

19665 NOTE ON THE PRESSURE VARIATION OF SPECIFIC HEATS OF GASES DERIVED FROM COMPRESSIBILITY DATA.
HORTON,L.G. (UNIV. VIRGINIA)
PHYS. REV. VOL. 36, 1091-95 (SEPT 1930) 1 TAB 8 REF
A3 B1 C8 D1 E3 F6 G1 30
•OXYGEN, •GASEOUS, •SPECIFIC HEAT, PRESSURE EFFECT, CALCULATION

19666 A NEW METHOD OF MEASURING THE VARIATION OF THE SPECIFIC HEATS (CP) OF GASES WITH PRESSURE.
WORKMAN,E.J. (UNIV. VIRGINIA)
PHYS. REV. VOL. 36, 1081-90 (SEPT 1930) 3 FIG 1 TAB 8 REF
A3 B1 C8 D1 E1 F6 G1 30
•OXYGEN, •GASEOUS, •SPECIFIC HEAT, PRESSURE EFFECT

19687 ELECTRICAL INSULATION AT CRYOGENIC TEMPERATURES.
MATHES,K.N.
ELECTRO-TECHNOL. NEW YORK VOL. 72, NO. 3, 72-77 (SEPT 1963) 8 FIG 4 TAB 9 REF
MF NO. 195-P A2 B1 C5 D1 E2 F6 G1 63
•ELECTRICAL PROPERTY, DIELECTRIC BREAKDOWN, •PLASTIC, VINYL, POLYESTER, •NYLON, •TEFLON, ASBESTOS, GLASS FIBER, FLUOROCARBON, TITANATE, POLYETHYLENE,
A3 B1 C6 D1 E2
•HYDROGEN, •NITROGEN, •HELIUM, •LIQUID, •ELECTRICAL PROPERTY, DIELECTRIC BREAKDOWN,
A3 B1 C6 D1 E2
•HYDROGEN, •GASEOUS, •ELECTRICAL PROPERTY, DIELECTRIC BREAKDOWN, •THERMAL EXPANSION

19693 JOULE-THOMSON EFFECT IN HELIUM AT LOW TEMPERATURES.
ZEILMANOV,J.L.
J. PHYS. U.S.S.R. VOL. 3, 43-52 (1940) 11 FIG 5 TAB 5 REF
MF NO. 196-C A3 B1 C5 D1 E1 F6 G1 40
•HELIUM, •GASEOUS, •JOULE-THOMSON COEFFICIENT, INVERSION CURVE

19694 CRYOGENIC PUMPING.
HENAULT,P.B. FENNEMA,P.J. HUFFMAN,B.A.
J. ENVIRONMENTAL SCI. VOL. 6, NO. 4, 15-20 (AUG 1963) 5 FIG 2 TAB 10 REF
MF NO. 195-R A6 B1 C5 D1 E2 F6 G1 63
•CRYOPUMPING, STICKING COEFFICIENT,
A3 B1 C1 D1 E2
•VAPOR PRESSURE, •SOLIDIFIED GAS, •HYDROGEN, •NEON, •NITROGEN, •CARBON MONOXIDE, •OXYGEN, •METHANE, •CARBON DIOXIDE, •WATER

19697 A QUANTUM HARD-SPHERE EQUATION OF STATE.
HILLIER,I. WALKLEY,J.
TRANS. FARADAY SOC. VOL. 59, NO. 484, 1093-1100 (1963) 4 FIG 12 REF
MF NO. 195-M A3 B1 C2 D3 E3 F7 G1 63
•EQUATION OF STATE, QUANTUM EFFECT, •GASEOUS, •HYDROGEN, •DEUTERIUM, COMPRESSIBILITY FACTOR, NEON, ARGON

19700 MEASUREMENTS OF VISCOSITY OF KRYPTON.
CLIFTON,D.G.
J. CHEM. PHYS. VOL. 38, NO. 5, 1123-31 (MAR 1963) 4 FIG 7 TAB 37 RE
MF NO. 196-E A3 B1 C8 D1 E1 F6 G1 63
•KRYPTON, •GASEOUS, •VISCOSITY, •THERMAL CONDUCTIVITY, CALCULATION, EQUATION, TEMPERATURE EFFECT, •TRANSPORT PROPERTY, THERMAL DIFFUSION, SECOND VIRIAL COEFFICIENT, LATTICE PARAMETER, •HEAT OF SUBLIMATION

19703 THE EQUATION OF STATE AND THERMODYNAMIC PROPERTIES OF OXYGEN.
KISSEL'MAN,P.M.
INZ. FIZ. ZHUR. VOL. 6, 61-67 (JUN 1963) 2 TAB 10 REF
MF NO. 198-I A3 B7 C7 D1 E3 F7 G1 63
•OXYGEN, •GASEOUS, •PVT DATA, COMPRESSIBILITY FACTOR, •EQUATION OF STATE, CALCULATION

19704 SURFACE TENSION OF LIQUIDS.
HARASIMA,A.
PROC. PHYS-MATH. SOC. JAPAN VOL. 23, NO. 12, 583-91 (1941) 23 TAB
MF NO. 196-L A3 B1 C5 D1 E3 F7 G1 41
•SURFACE TENSION, SURFACE ENERGY, •LIQUID, •HELIUM, •HYDROGEN, •DEUTERIUM, •NEON, •NITROGEN, •ARGON, EQUATION, CALCULATION

19705 CONCERNING THE EQUATION OF STATE OF HELIUM.
PRECVODITELEV,A.S.
INZ. FIZ. ZHUR. VOL. 6, 54-60 (JUN 1963) 3 FIG 3 TAB 2 REF
MF NO. 198-J A3 B7 C8 D1 E3 F7 G1 63
•HELIUM, •GASEOUS, •EQUATION OF STATE, VIRIAL COEFFICIENT, •PVT DATA, CALCULATION

19708 UBER DIE VERDAMPFUNGSWARME VON SAUERSTOFF UND SCHWEFELDIOXYD. ON THE HEATS OF VAPORIZATION OF OXYGEN AND SULFUR DIOXIDE.
ESTREICHER,P.T.
BULL. INTERN. ACAD. SCI. CRACOVIE, CLASSE SCI. MATH. NAT., NO. 3, 183-96 (1904) 2 FIG 1C REF
MF NO. 194-Y A3 B3 C7 D1 E1 F7 G1 54
•OXYGEN, •INORGANIC FLUID, SULFUR DIOXIDE, •LIQUID, •HEAT OF VAPORIZATION

19709 LENNARD-JONES AND DEVONSHIRE EQUATION OF STATE OF COMPRESSED GASES AND LIQUIDS.
WENTORF,R.H.,JR. BUEHLER,R.J. HIRSCHFELDER,J.O. CURTISS,C.F.
J. CHEM. PHYS. VOL. 18, NO. 11, 1484-1500 (NOV 1950) 7 FIG 23 TAB 18 REF
CA 45 3672G MF NO. 196-N A3 B1 C1 D1 E3 F6 G1 50
•EQUATION OF STATE, LENNARD-JONES FUNCTION, •GASEOUS, •HYDROGEN, •NITROGEN, •HELIUM, •NEON, •ARGON, •INTERNAL ENERGY, •SPECIFIC HEAT, GAS IMPERFECTION, •ENTROPY, COMPRESSIBILITY FACTOR, •FREE ENERGY

19711 COMPRESSIBILITY OF HELIUM-NITROGEN MIXTURES.
MILLER,J.C. STROUD,L. BRANDT,L.W.
J. CHEM. ENG. DATA VOL. 5, NO. 1, 6-9 (JAN 1960) 3 FIG 1 TAB 10 RE
MF NO. 195-E A3 B1 C8 D1 E1 F6 G1 60
•HELIUM, •NITROGEN, •GASEOUS MIXTURE, •BINARY SYSTEM, •PVT DATA, CONCENTRATION EFFECT, •GASEOUS

19721 TIEFTEMPERATURZERLEGUNG KOHLENWASSERSTOFFREICHER GASE ZUR GEWINNUNG VON ATHYLEN UND PROPYLEN. THE SEPARATION OF ETHYLENE AND PROPYLENE FROM HYDROCARBON-GAS-MIXTURES AT LOW TEMPERATURES.
BALCUS,H. LINDE,G.
KALTETECHNIK VOL. 15, NO. 6, 159-66 (JUN 1963) 9 FIG 4 TAB 16 REF
MF NO. 194-R A6 B3 C1 D1 E1 F7 G1 63
•SEPARATION, ETHYLENE, PROPYLENE,
A3 B3 C1 D1 E1
•VAPOR PRESSURE, •LIQUID, •HYDROGEN, •CARBON MONOXIDE, •METHANE, ETHYLENE, PROPYLENE, •ETHANE, •PROPANE, •HYDROCARBON

19728 EXPERIMENTAL ENTHALPIES FOR NITROGEN.
MAGE,D.T. JONES,M.L.,JR. KATZ,D.L. ROEBUCK,J.R.
CHEM. ENG. PROGR. SYMP. SER. VOL. 59, NO. 44, 61-65 (1963) 4 FIG
CA 59 4597G MF NO. 194-N A3 B1 C7 D1 E1 F6 G1 63
•NITROGEN, •GASEOUS, •SPECIFIC HEAT, •HEAT OF VAPORIZATION, •ENTHALPY, PRESSURE-ENTHALPY DIAGRAM, SATURATED VAPOR, SATURATED LIQUID

19774 ACCUSTIC ISOTHERMS FOR NITROGEN, ARGON, AND KRYPTON.
LESTZ,S.S. (UNIV. WISCONSIN, MADISON)
J. CHEM. PHYS. VOL. 38, 2830-34 (1963) 3 FIG 7 TAB 2 REF
CA 59 1115C MF NO. 201-A A3 B1 C8 D1 E1 F6 G1 63
•GASEOUS, •NITROGEN, •ARGON, •KRYPTON, •VELOCITY OF SOUND, ISOTHERM, •SPECIFIC HEAT

19776 EXPERIMENTAL EVIDENCE OF A MINIMUM IN THE MELTING CURVE OF HE4.
WIEBES,J. KRAMERS,H.C. (KAMERLINGH ONNES LAB., LEIDEN, NETHERLANDS)
PHYS. LETTERS VOL. 4, 298-99 (1963) 1 FIG 4 REF
CA 59 4561G MF NO. 200-S A3 B1 C4 D E1 F7 G1 63
•HELIUM, HELIUM 4, •MELTING CURVE, •SOLIDIFIED GAS

19792 SURFACE TENSION OF LIQUID HELIUM.
ATKINS,K.R. NARAHARA,Y. (UNIV. PENN., PHILADELPHIA)
PROC. INTERN. CONF. LOW TEMP. PHYS., 7TH TORONTO, CAN., 1960, 549-51 (1961) 1 FIG 5 REF
MF NO. 201-I A3 B1 C4 D3 E1 F6 G2 61
•HELIUM, HELIUM 4, •LIQUID, •SURFACE TENSION

19801 RADIAL DISTRIBUTION FUNCTIONS AND THE EQUATION OF STATE OF MONATOMIC FLUIDS.
ZWANZIG,R.W. KIRKWOOD,J.G. STRIPP,K.F. OPPENHEIM,I.
(YALE UNIV., NEW HAVEN, CONN.)
J. CHEM. PHYS. VOL. 21, NO. 7, 1268-71 (1953) 7 TAB 7 REF
MF NO. 201-Z A3 B1 C1 D1 E3 F6 G1 53
•EQUATION OF STATE, •ARGON, •CRITICAL CONSTANT, HEILING TO CRITICAL POINT, •GASEOUS, EXCESS PROPERTY, •INTERNAL ENERGY, COMPRESSIBILITY, DISTRIBUTION FUNCTION

19895 I. THE SECOND VIRIAL COEFFICIENT OF ARGON AT LOW TEMPERATURES AND LOW PRESSURES. II. THE HEAT CAPACITY OF LIQUID NITRIC OXIDE ABOVE ITS NORMAL BOILING POINT.
KERR,E.C.
OHIO STATE UNIV., COLUMBUS, PH.D. THESIS (1957) 80 PP 9 FIG 10 TAB 39 REF (AVAIL. UNIV. MICROFILMS, ANN ARBOR, MICH., PUBL. NO. 21486, 62.75)
CA 51 14353C MF NO. 204-C A3 B1 C7 D1 E1 F9 G7 57
•ARGON, •GASEOUS, •PVT DATA, SECOND VIRIAL COEFFICIENT,
A3 B1 C7 D1 E1
•INORGANIC FLUID, OXIDE OF NITROGEN, •LIQUID, •SPECIFIC HEAT, SATURATED LIQUID, •ENTROPY, •DENSITY, •VAPOR PRESSURE

19904 TEMPERATURE DEPENDENCE OF THE THERMAL CONDUCTIVITY OF LIQUIDS.
HORROCKS,J.K. MCLAUGHLIN,E. (IMP. COLL., LONDON)
TRANS. FARADAY SOC. VOL. 59, NO. 488, 1709-16 (1963)
CA 59 9344G A3 B1 C1 D E3 F7 G1 63
•THERMAL CONDUCTIVITY, •LIQUID, •CARBON MONOXIDE, •ARGON, •NITROGEN •METHANE, TEMPERATURE EFFECT

19909 VIBRATIONAL RELAXATION IN OXYGEN.
HOLMES,R. SMITH,F.A. TEMPEST,W. (UNIV. LIVERPOOL, ENGL.)
PROC. PHYS. SOC. (LONDON) VOL. 81, NO. 520, 311-19 (1963)
CA 59 935GB A3 B1 C2 D E1 F6 G1 63
•VELOCITY OF SOUND, •ARGON, •NITROGEN, •GASEOUS, OXYGEN, SOUND ABSORPTION, •PHYSICAL PROPERTY

19965 LENNARD-JONES AND DEVONSHIRE EQUATION OF STATE AT LOW TEMPERATURES.
DAVID,H.G. HAMANN,S.D. (COMMONWEALTH SCI. IND. RES. ORGAN., MELBOURNE)
J. CHEM. PHYS. VOL. 38, 3037-39 (1963)
CA 59 13362F A3 B1 C8 D E3 F6 G1 63
•ARGON, •SOLIDIFIED GAS, •EQUATION OF STATE, •PVT DATA, LENNARD-JONES FUNCTION

19969 TEMPERATURE DEPENDENCE OF VISCOSITY OF N-ALKANES.
KARAPET'YANTS,M.KH. YEN,K-S (D. I. MENDELEEV CHEM.-TECHNOL. INST., MOSCOW)
ZH. FIZ. KHIM. VOL. 37, NO. 9, 2041-47 (1963)
CA 59 13369E A3 B7 C7 D3 E2 F7 G1 63
•METHANE, •ETHANE, •PROPANE, •BUTANE, •HYDROCARBON, PENTANE, HEPTANE, PARAFFIN CLASS, •LIQUID, •VICOSITY, TEMPERATURE EFFECT, EQUATION, CALCULATION

19990 THE VISCOSITY OF HELIUM AND NEON AS A FUNCTION OF DENSITY AND TEMPERATURE.
LEMAIRE,N.A.
BROWN UNIV., PROVIDENCE, R.I. THESIS (1962) 151 PP (ABSTR. IN DISSERTATION ABSTR. VOL. 23, 2716, 1963) (AVAIL. UNIV. MICROFILM, ANN ARBOR, MICH. ORDER NO. 63-1041)
CA 58 13160D A3 B1 C8 D1 E1 F9 G7 62
•HELIUM, •NEON, •GASEOUS, •VISCOSITY, PRESSURE EFFECT, HIGH PRESSURE ISOTHERM

20007 EQUATION OF STATE FOR DIFLUORODICHLOROMETHANE (FREON-12).
TSIMMAN,G.I.
INZH. -FIZ. ZH., AKAD. NAUK BELORUS. SSR VOL. 6, NO. 7, 121-23 (19
CA 59 12263E A3 B7 C8 D1 E3 F7 G1 63
•REFRIGERANT, FREON 12, •GASEOUS, •EQUATION OF STATE, •PVT DATA, FREON 13, FREON 14

20010 TEMPERATURE DEPENDENCE OF THE VISCOSITY OF PURE LIQUIDS. II.
TR. ODESSK. GIDROMETEROL. INST. VOL. 1961, NO. 27, 53-57 (1961)
•VISCOSITY, •LIQUID, EQUATION, TEMPERATURE EFFECT, •ARGON, •NITROGEN, •METHANE, •HYDROCARBON, •OXYGEN, •HYDROGEN, •CARBON MONOXIDE

20011 DETERMINATION OF THE POTENTIAL PARAMETERS OF H2, CO2, AND H2-CO2
ANN. UNIV. MARIAE CURIE-SKLODOWSKA, LUBLIN-POLONIA, SECT. AA VOL. , 1-27 (1959)
CA 59 12209D A3 B9 C8 D E2 F7 G1 59
•HYDROGEN, •CARBON DIOXIDE, •GASEOUS, •GASEOUS MIXTURE, •BINARY SYSTEM, •VISCOSITY, TEMPERATURE EFFECT, INTERMOLECULAR FORCE, LENNARD-JONES FUNCTION, THERMAL DIFFUSION

20034—See Appendix

20036 THE PHASE AND VOLUMETRIC BEHAVIOR OF NATURAL GASES AT LOW TEMPERATURES AND HIGH PRESSURES.
DAVIS,P.C. BERTUZZI,A.F. GORE,T.L. KURATA,F.
J. PETROL. TECHNOL. VOL. 6, NO. 10, 37-43 (OCT 1954) 4 FIG 6 TAB 31 REF
MF NO. 202-F A3 B1 C8 D1 E1 F6 G1 54
•HYDROCARBON, NATURAL GAS, •GASEOUS MIXTURE, PVT DATA, BUBBLE POINT, DEW POINT, •PHASE EQUILIBRIUM, •CRITICAL CONSTANTS, •NITROGEN, •METHANE

20038 PROPERTIES OF MATERIALS AT HIGH PRESSURES AND TEMPERATURES.
BIRCH,F. ROBERTSON,E.C.
HARVARD UNIV., DUNBAR LAB., CAMBRIDGE, MASS., TECH. REPT. (MAR 1957) CONTR. NO. N5ORI-07644, 36 PP 16 FIG 7 TAB 31 REF
DDC AD 128 707 A3 B1 C8 D1 E1 F5 G5 57
•ARGON, •NITROGEN, •SOLIDIFIED GAS, •MELTING CURVE, EQUATION, CALCULATION, VERY HIGH PRESSURE

20063 GRUNDLAGEN ZUR AUFSTELLUNG VON MOLLIERDIAGRAMMEN FUR KALTEMITTEL. FOUNDATIONS FOR THE PREPARATION OF MOLLIER DIAGRAMS FOR REFRIGERANTS.
ROSEUSCH,U.K. MORSY,T. (KARLSRUHE)
CHEM. ING. TECH. VOL. 35, NO. 2, 122 (1963)
CNRS 24-3-13466 A3 B3 C8 D E2 F7 G1 63
•REFRIGERANT, FREON, •GASEOUS, •LIQUID, MOLLIER DIAGRAM, •ENTHALPY

20065 THERMAL EXCITATIONS IN SOLID HE4.
GOLDSTEIN,L. (LOS ALAMOS SCI. LAB., N. MEX.)
PHYS. REV. VOL. 128, NO. 4, 1520-30 (1962)
CNRS 24-3-13284 A3 B1 C5 D E1 F6 G1 62
•HELIUM, HELIUM 4, •SOLIDIFIED GAS, •EXPANSIVITY, THERMAL EXPANSION, HELIUM II, •MELTING CURVE, SPECTRA

20134 METHANE-PROPANE-PENTANE SYSTEM, CRITICAL TEMPERATURES AND PRESSURES OF TERNARY SYSTEMS FROM LIMITED DATA.
MEHRA,V.S. THODOS,G. (NORTHWESTERN UNIV., EVANSTON, ILL.)
J. CHEM. ENG. DATA VOL. 7, PT. 1, 497-98 (1962)
CA 58 3954F A3 B1 C2 D E1 F6 G1 62
•METHANE, •PROPANE, PENTANE, •TERNARY SYSTEM, CRITICAL TEMPERATURE, •CRITICAL CONSTANT, •BINARY SYSTEM, •GASEOUS MIXTURE, •LIQUID MIXTURE, PTX DATA

20135 THE PREDICTION OF VAPOR-LIQUID EQUILIBRIUM CONSTANTS OF BINARY HYDROCARBON SYSTEMS IN THE CRITICAL REGION.
MEHRA,V.S. THODOS,G. (NORTHWESTERN UNIV., EVANSTON, ILL.)
A.I. CH. E. JOURNAL VOL. 8, 604-07 (1962)
CA 58 3956B A3 B1 C7 D E3 F6 G1 62
•CRITICAL CONSTANT, •LIQUID MIXTURE, •GASEOUS MIXTURE, •NITROGEN, •OXYGEN, •PHASE EQUILIBRIUM, LIQUID-VAPOR EQUILIBRIUM EQUILIBRIUM CONSTANT

20181 THEORY OF PHASE TRANSITIONS IN SOLIDS METHANE.
TAIT,W.C. JAMES,H.M. (PURDUE UNIV., LAFAYETTE, IND.)
AM. PHYS. SOC. MEETING, WASHINGTON, D.C. (APR 23-26, 1962) PAPER P10 (ABSTR. IN BULL. AM. PHYS. SOC. VOL. 7, NO. 4, 321, 1962)
CNRS 24-3-13270 A3 B1 C6 D E3 F6 G1 62
•METHANE, •SOLIDIFIED GAS, •PHASE TRANSITION PROPERTY, SOLID-SOLID TRANSITION, THEORY

20247 MEASUREMENT OF THE THERMODYNAMIC PROPERTIES OF GASES AT LOW TEMPERATURE AND HIGH PRESSURE-METHANE.
JONES,P.L.,JR. MAGE,D.T. FAULKNER,R.C.,JR. KATZ,D.L.
(UNIV. MICH., ANN ARBOR)
CHEM. ENG. PROGR. SYMP. SER. VOL. 59, NO. 44, 52-60 (1963) 10 FIG 3 TAB 11 REF
CA 59 5858G MF NO. 203-I A3 B1 C7 D E1 F6 G1 63
•METHANE, •GASEOUS, •LIQUID, •ENTHALPY, PRESSURE ENTHALPY DIAGRAM, •SPECIFIC HEAT, •HEAT OF VAPORIZATION, PRESSURE EFFECT, TEMPERATURE EFFECT, SATURATED LIQUID, SATURATED VAPOR

20248 COMPRESSION DE L'OXYGENE AUX TRES HAUTES PRESSIONS PAR ONDES DE CHOC ENGENDREES DANS LE LIQUIDE. COMPRESSION OF OXYGEN AT VERY HIGH PRESSURES THROUGH THE PRODUCTION OF SHOCK WAVES WITHIN THE LIQUID.
DAPCEVICH,V. KIEFFER,J. VODAR,B. (LAB. DES HAUTES PRESSIONS, MELLEVUE)
J. PHYS. RADIUM VOL. 17, 606-C7 (1956) 1 FIG 3 REF
MF NO. 203-V A3 B2 C7 D3 E1 F7 G1 56
•PVT DATA, •OXYGEN, •LIQUID, SHOCK WAVE, •VERY HIGH PRESSURE

20250 MESURE DE LA VITESSE DES ULTRASONS DANS LES FLUIDES SOUS PRESSION PAR LA METHODE DES IMPULSIONS. MEASUREMENT OF THE VELOCITY OF ULTRASONIC WAVES IN FLUIDS UNDER PRESSURE BY THE PULSE METHOD.
MARTIN,A.V.J.
J. RECH. CENTRE NATL. RECH. SCI. LAB. BELLEVUE (PARIS) NO. 61, 251-72 (DEC 1957) 34 FIG 7 TAB 92 REF
NF NO. 203-2 A3 A2 C8 D1 E1 F7 G1 57
•ARGON, •GASEOUS, •VELOCITY OF SOUND, •DENSITY, PRESSURE EFFECT, HIGH PRESSURE, •NITROGEN, •WATER

20252 THE VELOCITY OF SOUND IN GASES.
ABBEY,R.L. BARLOW,G.E. (UNIV. OF MELBOURNE)
AUSTRALIAN J. SCI. RES. VOL. A1, 175-89 (JUN 1948) 7 FIG 5 TAB 2 REF
NF NO. 203-5 A3 B1 C8 D1 E1 F7 G1 48
•AIR, •GASEOUS, •VELOCITY OF SOUND, •NITROGEN, •OXYGEN, •CARBON DIOXIDE, •METHANE, PRESSURE EFFECT

20267 EQUATION OF STATE FOR BINARY FLUID MIXTURES.
HECHT,C.E. (UNIV. WISCONSIN, MADISON)
J. CHEM. PHYS. VOL. 38, NO. 4, 1008-18 (1963) 34 REF
CNRS 24-3-14692 A3 B1 C1 D E3 F6 G1 63
•GASEOUS MIXTURE, •BINARY SYSTEM, •PVT DATA, COMPRESSIBILITY FACTOR, •METHANE, •HYDROCARBON, •CARBON MONOXIDE, •CARBON DIOXIDE, •NITROGEN, CALCULATION, •EQUATION OF STATE, •ETHANE

20268 PARTIAL ENTHALPIES OF COMPONENTS IN GAS MIXTURES VIA REDLICH-KWONG EQUATION OF STATE.
EDMISTER,W.C. THOMPSON,R.V. YARBROUGH,L. (OKLAHOMA STATE UNIV., STILLWATER)
A.I.CH.E. JOURNAL VOL. 9, NO. 1, 116-20 (1963)
CNRS 24-NO.-14693 A3 B1 C8 D E3 F6 G1 63
•GASEOUS MIXTURE, •BINARY SYSTEM, •EQUATION OF STATE, •ENTHALPY, •METHANE, •ETHANE, CALCULATION, •PROPANE, BUTANE, PENTANE

20285 THE THEORY OF PHASE TRANSITIONS IN SOLID HEAVY METHANE.
TAIT,W.C.
PURDUE UNIV., LAFAYETTE, INDIANA, THESIS (1962) 147 PP
(ABSTR. IN DISSERTATION ABSTR. VOL. 23, 670, 1662) (AVAIL. UNIV. MICROFILMS, ANN ARBOR, MICH., ORDER NO. 62-3453)
CA 58 6266D A3 B1 C8 D1 E3 F9 G7 62
•METHANE, DEUTERO-METHANE, •SOLIDIFIED GAS, •PHASE TRANSITION PROPERTY, SOLID-SOLID TRANSITION, THEORY, CALCULATION

20296 A MOLECULAR PARAMETER RELATIONSHIP FOR SURFACE TENSION AND LIQUID COMPRESSIBILITY.
MAYER,S.W. (AEROSPACE CORP., EL SEGUNDO, CALIF.)
J. PHYS. CHEM. VOL. 67, NO. 10, 2160-64 (1963) 6 TAB 11 REF
CA 59 122C8F A3 B1 C7 D1 E3 F6 G1 63
•LIQUID, •SURFACE TENSION, •COMPRESSIBILITY, EQUATION, •EQUATION OF STATE, •OXYGEN, •NITROGEN, •ARGON, •ORGANIC FLUID, •HYDROCARBON, •INORGANIC FLUID, WATER

20297 WEITERE VERSUCHE MIT PARAWASSERSTOFF. EXPERIMENTS ON PARAHYDROGEN.
BONHOEFFER,K.F. HARTECK,P.
NATURWISSENSCHAFTEN VOL. 17, 321-22 (1929)
CA 23 5361 A3 B3 C6 D1 E1 F7 G1 29
•PARAHYDROGEN, •VAPOR PRESSURE, •LIQUID, •SOLID, TRIPLE POINT

20338 DIE WARMELEITFAHIGKEIT VON FLUSSIGKEITEN. HEAT CONDUCTIVITY OF LIQUIDS.
ROBBINS,L.A. KINGREA,C.L.
PETROL. REFINER VOL. 41, NO. 5, 133 (1962); KALTETECHNIK VOL. 15, NO. 4, 117-18 (1963) 4 FIG 1 TAB 4 REF
IIR 1295I A3 B1 C8 D E3 F6 G1 62
•REFRIGERANT, FREON, •LIQUID, •THERMAL CONDUCTIVITY, CALCULATION

20342 THE VISCOSITY OF LIQUID HE II.
HOLLIS-HALLET,A.C.
TRANS. SOC. RHEOL. VOL. 6, 392 (1962)
IIR 1296J A3 B1 C4 D1 E1 F7 G1 62
•HELIUM, HELIUM II, •LIQUID, •VISCOSITY, TEMPERATURE EFFECT

20370 ERGEBNISSE DER TIEFTEMPERATURFORSCHUNG XL. DIE DAMPFDRUCKE VON 36AR UND 40AR ZWISCHEN SCHMELZ- UND SIEDEPUNKT. LOW-TEMPERATURE RESEARCH. XL. THE VAPOR PRESSURES OF AR36 AND ARAC BETWEEN THE MELTING AND BOILING POINTS.
CLUSIUS,K. SCHLEICH,K. VOGELMANN,M. (UNIV. ZUERICH, SWITZ.)
HELV. CHIM. ACTA VOL. 46, NO. 5, 1705-14 (1963) 3 FIG 5 TAB 22 REF
CA 59 14604C A3 B3 C7 D1 E1 F7 G1 63
•ARGON, •LIQUID, ISOTOPE, •VAPOR PRESSURE, •TRIPLE POINT, MELTING TEMPERATURE, EQUATION, VAPOR PRESSURE RATIO, •BOILING POINT

20373 EFFICIENCY OF EQUATIONS OF STATE FOR GASEOUS MIXTURES AT THE CRITICAL LOCUS. I. APPLICATION OF THE EQUATION OF BENEDICT, WEBB, AND RUBIN. II. FURTHER IMPROVEMENTS OF AN EQUATION OF STATE.
ACKERMAN,F.J. (UNIV. OF CALIFORNIA, BERKELEY)
CALIF. UNIV., RADIATION LAB., BERKELEY, REPT. NO. UCRL-10656 (FEB 1963) CONTR. NO. W-7405-ENG-48, 66 PP 33 FIG 3 TAB 59 REF
CA 59 122C3C A4 B1 C8 D1 E3 F3 G5 63
FUGACITY, •EQUATION OF STATE, •HYDROCARBON, BENEDICT-WEBB-RUBIN EQUATION, REDLICH-KWONG EQUATION, CRITICAL REGION, •INORGANIC FLUID, •GASEOUS MIXTURE,
A3 B1 C8 D1 E3
•GASEOUS MIXTURE, •EQUATION OF STATE, •METHANE, •HYDROCARBON, CALCULATION

20384 METHOD OF DETERMINING SATURATED LIQUID AND SATURATED VAPOR ENTROPY.
WALKER,R.A. (AEROJET-GENERAL CORP., SACRAMENTO, CALIF.)
AIAA JOURNAL VOL. 1, NO. 11, 2636-38 (NOV 1963)16 FIG 3 REF
A3 B1 C7 D3 E3 F6 G1 63
•ENTROPY, •LIQUID, •GASEOUS, SATURATED LIQUID, SATURATED VAPOR, CALCULATION, T-S DIAGRAM, •OZONE, OXYGEN DIFLUORIDE, •OXYGEN

20389 THE VARIATION IN THE VISCOSITY OF CERTAIN MIXTURES OF GASES AND OXYGEN UNDER THE INFLUENCE OF A MAGNETIC FIELD.
URSU,I.
ACAD. REP. POPULARE ROMINE STUDII CERCETARI FIZ. VOL. 9, NO. 2, 193-202 (1958)
PA 64 158 A3 B9 C2 D C1 F7 G1 58
•GASEOUS MIXTURE, •AIR, •OXYGEN, •BINARY SYSTEM, •HYDROGEN, •METHANE, •VISCOSITY, MAGNETIC FIELD

20390 XENON-KRYPTON, XENON-ARGON, XENON-NEON AND XENON-HELIUM VISCOSITY AND THERMAL CONDUCTIVITY OF BINARY GAS MIXTURES.
THORNTON,E.
PROC. PHYS. SOC. (LONDON) VOL. 76, PT. 1, 104-12 (JUL 1960)
PA 64 159 A3 B1 CC D E F6 G1 60
•BINARY SYSTEM, •GASEOUS MIXTURE, •VISCOSITY, •THERMAL CONDUCTIVITY, •XENON, •KRYPTON,
A3 B1 CC D E
•BINARY SYSTEM, •GASEOUS MIXTURE, •VISCOSITY, •THERMAL CONDUCTIVITY, •XENON, •ARGON,
A3 B1 CC D E
•BINARY SYSTEM, •GASEOUS MIXTURE, •VISCOSITY, •THERMAL CONDUCTIVITY, •XENON, •NEON,
A3 B1 CC D E
•BINARY SYSTEM, •GASEOUS MIXTURE, •VISCOSITY, •THERMAL CONDUCTIVITY, •XENON, •HELIUM

20431 ATMOSPHERIC THERMAL CONDUCTIVITIES FOR GASES OF SIMPLE MOLECULAR STRUCTURE.
MASON,D. THODOS,G. (NORTHWESTERN UNIV., EVANSTON, ILL.)
J. CHEM. ENG. DATA VOL. 8, NO. 4, 544-44 (OCT 1963) 2 FIG 96 REF
A3 B1 C1 D1 E3 F6 G1 63
•THERMAL CONDUCTIVITY, •GASEOUS, •REDUCED VARIABLE, LAW OF CORRESPONDING STATES, •NEON, •HELIUM, REVIEW, •ARGON, •KRYPTON, •XENON, •OXYGEN, •HYDROGEN, •NITROGEN, •CARBON MONOXIDE,
A3 B1 C1 D1 E3
•THERMAL CONDUCTIVITY, •GASEOUS, •REDUCED VARIABLE, LAW OF CORRESPONDING STATES, OXIDE OF NITROGEN, •FLUORINE, •CARBON DIOXIDE, •AMMONIA, •METHANE

20432 THERMODYNAMIC FUNCTIONS OF METHANE.
MCCONNELL,R.S. KRUSE,F.H. (LOS ALAMOS SCIENTIFIC LAB., UNIV. OF CALIF., LOS ALAMOS, N.M.)
J. CHEM. ENG. DATA VOL. 8, NO. 4, 547-48 (OCT 1963) 3 TAB 16 REF
A3 B1 C7 D1 E3 F6 G1 63
•METHANE, •GASEOUS, •SPECIFIC HEAT, •ENTHALPY, •FREE ENERGY, •ENTROPY, TEMPERATURE EFFECT, CALCULATION

20466 EXPERIMENTAL STUDY OF THERMAL PROPERTIES OF AN AZEOTROPIC MIXTURE OF FREON-124 AND FREON-C318.
PERELSHTEIN,I.I.
INZH.-FIZ. ZH., AKAD. NAUK BELORUS. SSR VOL. 5, NO. 12, 27-33 (1962)
CA 58 6256D A3 B7 C8 D E1 F7 G1 62
•LIQUID MIXTURE, •REFRIGERANT, FREON, •BINARY SYSTEM, VAPOR PRESSURE OF MIXTURE, •DENSITY, •BOILING POINT

20499 ISOTOPIC THERMAL-DIFFUSION FACTOR OF ARGON.
PAUL,R. HOWARD,A.J. WATSON,W.W. (YALE UNIV.)
J. CHEM. PHYS. VOL. 36, NO. 11, 3053-56 (1963)
CA 59 14605C A3 B1 C7 D E1 F6 G1 63
•ARGON, •GASEOUS, •TRANSPORT PROPERTY, THERMAL DIFFUSION, DIFFUSION COEFFICIENT, SECOND VIRIAL COEFFICIENT

20547 SECOND AND THIRD VIRIAL COEFFICIENTS FOR HYDROGEN.
GOODWIN,R.D. DILLER,C.E. RODER,H.M. WEBER,L.A.
J. RES. NATL. BUR. STANDARDS VOL. 68A, NO. 1, 121-26 (JAN-FEB 1964) 4 FIG 5 TAB 14 REF
A3 B1 C6 D1 E3 F6 G1 64
•PARAHYDROGEN, •GASEOUS, •EQUATION OF STATE, SECOND VIRIAL COEFFICIENT, THIRD VIRIAL COEFFICIENT

20550 COMPARISON OF DIFFUSER-EJECTER PERFORMANCE WITH FIVE DIFFERENT DRIVING FLUIDS.
HALE,J.W.
ARO, INC., ARNOLD AIR FORCE STA., TENN., REPT. NO. AEDC-TDR-63-207 (OCT 1963) CONTR. NO. AF 40(600)-1000, 34 PP 11 FIG 2 TAB 25 REF
NASA N63 22956 A6 B1 C1 D1 E1 F3 G5 63
•FLUID FLOW, •AIR, •NITROGEN, •ARGON, •HELIUM, •HYDROGEN, NOZZLE, NOZZLE PARAMETER, EXPANSION, SPECIFIC HEAT, GASEOUS,
A3 B1 C1 D1 E1
•ARGON, •HYDROGEN, •HELIUM, •AIR, •NITROGEN, SPECIFIC HEAT RATIO, EXPANSION, •LIQUID, •SOLIDIFIED GAS, SATURATION CURVE

20553 THERMOCONDUCTIVITY OF SOLID ARGON.
BOATO,G.
GENOA UNIV., ISTITUTO DI FISICA SPERIMENTALE, ITALY, QUART. STATUS REPT. NO. 1, (JUL 1963) CONTR. NO. DA-91-591-EUC-2861, E-302-P, SPP 1 FIG
NASA N63 21544 A3 B1 C5 D1 E1 F3 G5 63
•ARGON, •SOLIDIFIED GAS, •THERMAL CONDUCTIVITY, TEMPERATURE EFFECT

20554 THERMODYNAMIC PROPERTIES OF METHANE AT HIGH DENSITIES.
MACIOSKY,W.P.
NAVAL ORDANCE LAB., WHITE OAK, MD., REPT. NO NOLTR 63-101 (AUG 1963) CONTR. NO. TASK FR-27, 12 PP 7 TAB 8 REF
DDC AD 417 642 A3 B1 C8 D1 E3 F5 G6 63
•METHANE, •GASEOUS, •EQUATION OF STATE, •PVT DATA, •SPECIFIC HEAT, •VELOCITY OF SOUND, CALCULATION

20585 — See P. Figure.

20590 POTENTIAL CONSTANTS AND THERMODYNAMIC FUNCTIONS OF TETRAFLUOROMETHANE.
NAGARAJAN,G. (ANNAMALAI UNIV., INDIA)
AUSTRALIAN J. CHEM. VOL. 15, 566-68 (1962)
CA 58 2965H A3 B1 C7 D E3 F7 G1 62
•INORGANIC FLUID, •ENTHALPY, •FREE ENERGY, •ENTROPY, •SPECIFIC HEAT, •GASEOUS, SPECTROSCOPIC DATA, CARBON TETRAFLUORIDE

20641 DIE WARMELEITFAHIGKEITEN VON NORMAL-UND ORTHO-DEUTERIUM BEI TEMPERATUREN DES FLUSSIGEN WASSERSTOFFES. THERMAL CONDUCTIVITY OF NORMAL AND ORTHODEUTERIUM AT LIQUID-HYDROGEN TEMPERATURES.
HEINZINGER,K. EICHENAUER,W. KLEMM,A.
Z. NATURFORSCH. VOL. 18A, 762-64 (1963) 1 FIG 1 REF
CA 59 5801B NF NO. 203-C A3 B3 C6 D3 E1 F7 G1 63
•DEUTERIUM, ORTHOPARA DEUTERIUM, •GASEOUS, •THERMAL CONDUCTIVITY, ORTHODEUTERIUM

20642 GENERALIZED THERMODYNAMIC PROPERTIES OF GASES AT HIGH PRESSURE.
MARCH,S.M. TURNBULL,D.
INC. ENG. CHEM. VOL. 34, 544-51 (1942) 1 FIG 4 TAB 30 REF
NF NO. 204-5 A3 B1 C8 D1 E3 F6 G1 42
•EQUATION OF STATE, BEATTIE BRIDGEMAN LAW OF CORRESPONDING STATES, •GASEOUS, EQUATION, •NITROGEN, ACTIVITY COEFFICIENT, •REDUCED VARIABLE, •OXYGEN, •HYDROGEN, •METHANE, •CARBON DIOXIDE, COMPRESSIBILITY FACTOR

20643 EXPONENT ADIABATY KYSLICNIKU UHLICITEHO. ADIABATIC EXPONENT OF CARBON DIOXIDE.
SIMONEK,J. SOBR,J.
JADERNA ENERGIE VOL. 9, 162-65 (1963) 1 FIG 2 TAB 6 REF
CA 59 10819A PF NO. 202-J A3 H9 C8 D1 E3 F7 G1 63
*CARBON DIOXIDE, SPECIFIC HEAT RATIO, *GASEOUS, CORRECTION

20645 SUR LA COMPRESSIBILITE A O DEGREE ET AU-DESSOLS DE 1 ATM, ET L'ECART A LA LOI D'AVOGADRO DE PLUSIEURS GAZ. I. OXYGENE, HYDROGENE ET ANHYDRIDE CARBONIQUE. ON THE COMPRESSIBILITY AT O DEGREE AND HELOW 1 ATM, AND THE DEVIATION FROM AVOGADROS LAW FOR SEVERAL GASSES. I. OXYGEN, HYDROGEN AND CARBON DIOXIDE.
GUYE,P.A. BATUECAS,T.
HELV. CHIM. ACTA VOL. 5, 532-43 (1922) 8 TAB 5 REF
PF NO. 204-L A3 B2 C4 D1 E1 F7 G1 22
*OXYGEN, *HYDROGEN, *CARBON DIOXIDE, *PVT DATA, AVOGADROS LAW, ATOMIC WEIGHT, *GASEOUS, MOLECULAR WEIGHT

2 646 SUR LA COMPRESSIBILITE A O DEGREE ET AU-DESSOLS DE 1 ATMOSPHERE ET L' ECART A LA LOI D'AVOGADRO DE PLUSIEURS GAZ. I. OXYGENE, HYDROGENE ET ANHYDRIDE CARBONIQUE. ON THE COMPRESSIBILITY AT O DEGREE AND HELOW 1 ATM, AND THE DEVIATION FROM AVOGADROS LAW FOR SEVERAL GASES. I. OXYGEN, HYDROGEN AND CARBON DIOXIDE.
GUYE,P.A. BATUECAS,T.
J. CHIM. PHYS. VOL. 2C, 308-36 (1923) 4 FIG 8 TAB 19 REF
PF NO. 205-C A3 B2 C8 D1 E1 F7 G1 23
*PVT DATA, *GASEOUS, *OXYGEN, *HYDROGEN, *CARBON DIOXIDE, AVOGADROS LAW, ATOMIC WEIGHT, MOLECULAR WEIGHT

20647 TH RY OF L.QUIDS.
MI R,T.S.
C RR AT SCI. (INDIA) VOL. 3, 347-48 (1935) 3 TAB 4 REF
PF NO. 198-I A3 B1 C1 D1 E3 F7 G1 35
*DENSITY, *SURFACE TENSION, *HELIUM, *HEAT OF VAPORIZATION, *HYDROGEN, *NEON, *NITROGEN, *ARGON, *LIQUID

20649 CALCULATION OF THE THERMODYNAMIC PROPERTIES OF DEUTERIUM.
RABINOVICH,V.A.
INZH.-FIZ. ZH., AKAD. NAUK BELORUS. SSR VOL. 6, NO. 4, 118-22 (1963) 2 FIG 2 TAB 5 REF
CA 59 9306H PF NO. 204-J A3 B7 C7 D E1 F7 G1 63
*DEUTERIUM, *GASEOUS, HYDROGEN, *EQUATION OF STATE, *PVT DATA

20651 EQUATION OF STATE AND THE THERMODYNAMIC PROPERTIES OF OXYGEN.
KESSEL'MAN,P.M.
INZH.-FIZ. ZH., AKAD. NAUK BELORUS. SSR VOL. 6, NO. 6, 61-67 (1963) 2 TAB 10 REF
CA 59 9351D PF NO. 204-F A3 B7 C7 D1 E3 F7 G1 63
*OXYGEN, *EQUATION OF STATE, *DENSITY, *GASEOUS, *ENTHALPY, *ENTROPY

20817 THE DIRECT MEASUREMENT OF THE ISOTHERMAL JOULE-THOMSON COEFFICIENT FOR GASES.
CHARNLEY,A. ISLES,G.L. TOWNLEY,J.R. (UNIV. OF MANCHESTER)
PROC. ROY. SOC. (LONDON) VOL. A210, 133-43 (1952) 7 FIG 17 REF
A3 B1 C8 D3 F1 F6 G1 58
*NITROGEN, *ETHYLENE, *INORGANIC FLUID, OXIDE OF NITROGEN, *CARBON DIOXIDE, *GASEOUS, *JOULE-THOMSON COEFFICIENT

20893 CALCULATION OF THE BOILING POINT OF INERT GASES AND MOLECULAR CRYSTALS.
OSHCHERIN,B.N. (LENINGRAD)
INZH.-FIZ. ZH. VOL. 6, NO. 9, 97-99 (1963) 3 TAB 10 REF
CA 59 14A01B PF NO. 208-A A3 B7 C1 D1 E3 F7 G1 63
*HELIUM, *ARGON, *NEON, *KRYPTON, *XENON, *SOLIDIFIED GAS, DEBYE CONSTANT, EQUATION, *BOILING TEMPERATURE, *RADON, *HYDROGEN, HELIUM 3, *METHANE, OXYGEN DIFLUORIDE

20895 JOULE-THOMSON COEFFICIENT OF METHANE.
TSATURYANTS,A.M. MAMEDOV,A.K.
IZV. AKAD. NAUK AZERB. SSR, SER. FIZ.-MAT. I TEKHN. NAUK VOL. 1962, NO. 3, 137-44 (1962) 2 FIG 3 TAB 10 REF
CA 58 1956E PF NO. 208-B A3 B7 C8 D1 E1 F7 G1 62
*METHANE, *GASEOUS, *JOULE-THOMSON COEFFICIENT

20896 ELASTICITY AND EXPANSION COEFFICIENTS OF HELIUM, HYDROGEN AND NITROGEN.
HEARING,F. HEUSE,W.
ARMY MISSILE COMM., HUNTSVILLE, ALA., TRANS. NO. RSIC-49 (AUG 1963) 38 PP 14 REF (TRANS. FROM Z. PHYSIK (BERLIN) VOL. 5, NO. 6, 285-314, 1921)
NASA N63 22223 A3 B1 C8 D1 E1 F3 G6 63
*HELIUM, *HYDROGEN, *NITROGEN, *GASEOUS, *EXPANSIVITY, *COMPRESSIBILITY, LOW PRESSURE,
A7 B1 C8 D1 E1
TEMPERATURE SCALE, HELIUM, THERMOMETRY

20897 SPECIES OF THE EQUATION OF STATE. IV. THE COMPRESSIBILITY EQUATION OF LIQUIDS.
MCHL,A.
REDSTONE SCI. INFORM. CENTER, ARMY MISSILE COMM., HUNTSVILLE, ALA., TRANS. NO. RSIC-50 (AUG 1963) 12 PP 9 REF (TRANS.-FROM Z. PHYSIK. CHEM. (FRANKFORT VOL. 59, 234-41, 1921)
NASA N63 21232 A3 B1 C8 D1 E3 F3 G6 21
*EQUATION OF STATE, *GASEOUS, *COMPRESSIBILITY, HIGH PRESSURE, *HYDROGEN, *CARBON DIOXIDE

20898 DETERMINATION OF HEAT CAPACITY, CV, OF OXYGEN NEAR THE CRITICAL POINT.
VORONEL,A.V. CHASHKIN,YU.R. POPOV,V.A. SIMKIN,V.G. (INST. PHYS.-TECH. AND RADIOTECH. MEASUREMENTS, MOSCOW)
ZHUR. EKSPTL. I TEORET. FIZ. VOL. 45 NO. 3, 828-37 (1963) 3 FIG 1 TAB 6 REF
CA 59 14659H PF NO. 202-I A3 B7 C8 D1 E1 F7 G1 63
*OXYGEN, *LIQUID, *CRITICAL REGION, *SPECIFIC HEAT, ISOCHORE, *CRITICAL CONSTANTS

20900 SURVEY OF CURRENT NBS WORK ON PROPERTIES OF PARAHYDROGEN.
GOODWIN,R.D. DILLER,C.E. HALL,W.J. MCCEEN,H.P.
WEBER,L.A. YOUNGLOVE,B.A.
ADVANCES IN CRYOGENIC ENGINEERING VOL. 9, 234-42 (PROC. 1963 CRYOGENIC ENG. CONF.) PLENUM PRESS, NEW YORK (1964) 6 FIG 1 TAB 22 REF
A3 B1 C8 D3 E2 F6 G2 63
*PARAHYDROGEN, *GASEOUS, *LIQUID, *DENSITY, *PVT DATA, *EQUATION OF STATE, VIRIAL COEFFICIENT, *MELTING CURVE, SATURATED LIQUID, SATURATED VAPOR, *CRITICAL CONSTANT, *HEAT OF VAPORIZATION, *JOULE-THOMSON COEFFICIENT, *VELOCITY OF SOUND,
A3 B1 C8 D3 E2
*PARAHYDROGEN, *LIQUID, *SPECIFIC HEAT, SATURATED LIQUID

20903 CALCULATION OF THE VAPOR PRESSURE AND HEATS OF VAPORIZATION AND SUBLIMATION OF LIQUIDS AND SOLIDS, ESPECIALLY HELIUM AT ATMOSPHERE PRESSURE. III. METHANE.
ZIEGLER,W.T. MULLINS,J.C. KIRK,B.S.
GEORGIA INST. TECHNOL. ENG. EXPT. STA., ATLANTA, REPT. NO. IR 3 (AUG 1962) CONTR. AC. CST-7238, PROJ. NO. A-460, 6C PP 4 FIG 1N TAB 47 REF
A3 B1 C8 D1 E3 F8 G5 62
*METHANE, *SOLIDIFIED GAS, *LIQUID, *SPECIFIC HEAT, *BOILING POINT, *TRIPLE POINT, SOLID-SOLID TRANSITION, *HEAT OF FUSION, *HEAT OF VAPORIZATION, *HEAT OF SUBLIMATION, *VAPOR PRESSURE, *DENSITY

20909 THE SPEED AND ABSORPTION OF ULTRASOUND IN NITROGEN AT PRESSURES UP TO 5000 KG./SQ. CM.
VOLAROVICH,M.P. MALASHOV,D.M.
SBORNIK ULTRAAKUSTIKI I ISSLED. KHIMICHESTVA,MOSCOW, 1961, NO. 13, 63-77
CA 58 386 A3 B7 C D E1 F7 G1 61
*NITROGEN, *GASEOUS, *PHYSICAL PROPERTY, SOUND ABSORPTION, HIGH FREQUENCY, SPECIFIC HEAT RATIO, *VELOCITY OF SOUND

20923 LATTICE THERMAL CONDUCTIVITY OF SOLID HELIUM.
AGRAWAL,B.K.
PHYS. REV. VOL. 126, 603-05 (1962)
CA 58 111A A3 B1 C5 D E1 F6 G1 62
*HELIUM, HELIUM 4, *SOLIDIFIED GAS, *THERMAL CONDUCTIVITY, THEORY, CALCULATION

20943 EQUATION OF STATE FOR PARAHYDROGEN.
TKACHENKO,E.A. HOLLERAN,E.M. MOSES,R.A.
CHEMISTRY DEPT., ST. JOHN'S UNIV., N. Y.
CRYOGENICS VOL. 4, NO. 1, 12-16 (FEB 1964) 6 TAB 11 REF
A3 B1 C6 D1 E3 F7 G1 64
*PARAHYDROGEN, *GASEOUS, *EQUATION OF STATE, *PVT DATA

20963 THE QUEST FOR DESIGN DATA.
STEWART,R.B.
PROC. ASHRAE SEMI-ANNUAL MEETING, N. Y. (FEB 11-14, 1963) 13-24 (V.J. JOHNSON, EDITOR) AM. SOC. HEATING, REFRIG. AIR CONDITIONING ENGRS., INC., N. Y. (1964) 5 FIG 7 REF
PF NO. 2C4-E A3 B1 C7 D3 E2 F6 G2 63
*OXYGEN, *HELIUM, *NITROGEN, *ARGON, *GASEOUS, LAW OF CORRESPONDING STATES, PVT DATA

20974 DIE SCHMELZKURVE UND DER VOLUMENSPRUNG AM SCHMELZPUNKT VON N2, NO, N2O, CO2 AND CO. DER TRENNFAKTOR DER STICKSTOFFISOTOPE IM SYSTEM NO/CH4 BEI 111,2 GRADES K. THE MELTING CURVE AND THE VOLUME CHANGE ON MELTING OF N2, NO, N2O, CO2, AND CO. THE SEPARATION FACTOR OF NITROGEN ISOTOPES IN THE SYSTEM NO/CH4 AT 111.2 DEGREES K.
VARGE,E.
ZUERICH UNIVERSITAET, SWITZERLAND, DOCTORAL DISSERTATION (1962) 56 PP 54 REF
CANS 24-3-17341 A3 B1 C7 D E1 F9 G7 62
*NITROGEN, *INORGANIC FLUID, OXIDE OF NITROGEN, *CARBON DIOXIDE, *CARBON MONOXIDE, *SOLIDIFIED GAS, *LIQUID, *MELTING CURVE, *DENSITY, VOLUME CHANGE,
A3 B1 C7 D E1
*GASEOUS MIXTURE, *LIQUID MIXTURE, *BINARY SYSTEM, *METHANE, OXIDE OF NITROGEN, *ISOTOPE, *PHASE EQUILIBRIUM

20975 KINETIC THEORY OF SIMPLE LIQUIDS.
RICE,S.A. (UNIV. CHICAGO)
AM. CHEM. SOC. ANSTR. PAPERS, NO. 144 (1963) 21 PP
CANS 24-3-17347 A3 B1 C5 D E1 F6 G1 63
*HELIUM, *NEON, *ARGON, *KRYPTON, *LIQUID, *THERMAL CONDUCTIVITY, *VISCOSITY, *TRANSPORT PROPERTY, DIFFUSION

21002 VISCOSITY MEASUREMENTS IN LIQUID NEON, ARGON, AND NITROGEN.
FORSTER,S. (TECHNISCHE UNIVERSITAT, DRESDEN, GER.)
CRYOGENICS VOL. 3, NO. 3, 176-77 (SEP 1963) 1 FIG 2 TAB 6 REF
A3 B1 C6 D1 E1 F7 G1 63
*VISCOSITY, *LIQUID, *NEON, *ARGON, *NITROGEN, TRIPLE POINT-TO-CRITICAL POINT

21016 AN APPROXIMATE CELL MODEL FOR LIQUID HYDROGEN, II.
HEADERSON,D.
PROC. NATL. ACAD. SCI. U.S. VOL. 4C, 487-92 (1963) 1 FIG 4 TAB 1C REF
PF NO. 206-F A3 B1 C8 D1 E3 F6 G1 63
*HYDROGEN, *DEUTERIUM, *TRITIUM, *HYDROGEN DEUTERIDE, DEUTERIUM TRITIDE, *GASEOUS, HYDROGEN TRITIDE, *ENTROPY, *INTERNAL ENERGY, *SPECIFIC HEAT, *REDUCED VARIABLE, *CRITICAL CONSTANT

21051 THERMODYNAMIC PROPERTIES OF METHANE AND NITROGEN AT LOW TEMPERATURES AND HIGH PRESSURES.
JONES,M.L.,JR.
MICHIGAN UNIV., ANN ARBOR, PH. D. THESIS (1962) 102 PP (ANSTR. IN DISSERTATION ABSTR. VOL. 23, 173, 1962) (AVAIL. UNIV. MICROFILMS, ANN ARBOR, MICH., ORDER NO. 62-2767)
CA 58 6256E PF NO. 262 A3 B1 C7 D1 E1 F9 G7 62
*NITROGEN, *LIQUID, *SPECIFIC HEAT, *HEAT OF VAPORIZATION, *VAPOR PRESSURE, *METHANE, *LIQUID, *SPECIFIC HEAT, *HEAT OF VAPORIZATION, *CRITICAL REGION, *ENTHALPY, PRESSURE-ENTHALPY DIAGRAM, *GASEOUS, *EQUATION OF STATE

21052 ELASTIC AND THERMAL PROPERTIES OF SOLID ARGON AT LOW TEMPERATURES.
WINTER,R.F.
MARYLAND UNIV., COLLEGE PARK, PH. D. THESIS (1963?) 93 PP (ANSTR. IN DISSERTATION ANSTR. VOL. 24, 359-6C , 1963) (AVAIL. UNIV. MICROFILMS, ANN ARBOR, MICH., ORDER NO. 63-4206)
CA 59 14592G PF NO. 260 A3 B1 C4 D E3 F9 G7 63
*ARGON, *SOLIDIFIED GAS, *EQUATION OF STATE, LATTICE PARAMETER, CRYSTAL STRUCTURE, LENNARD-JONES FUNCTION, ELASTIC CONSTANT, THERMAL EXPANSION, CALCULATION

21053 THE VISCOSITY OF NITROGEN AND ARGON AS A FUNCTION OF DENSITY AND TEMPERATURE.
FLYNN,G.P.
BROWN UNIV., PROVIDENCE, R.I., PH. D. THESIS (1962) 154 PP (ANSTR. IN DISSERTATION ANSTR. VOL. 23, 2337-38, 1963) (AVAIL. UNIV. MICROFILMS, ANN ARBOR, MICH., ORDER NO. 63-1018)
CA 58 9644E PF NO. 261 A3 B1 C8 D1 E1 F9 G7 63
*ARGON, *NITROGEN, *GASEOUS, *VISCOSITY, DENSITY, TEMPERATURE EFFECT, PRESSURE EFFECT, HIGH PRESSURE, EQUATION

21078 ISOTHERMS OF MONATOMIC SUBSTANCES AND THEIR BINARY MIXTURE XXV. ISOTH OF DIATOMIC SUBSTANCES XXXI. THE COMPRESSIBILITY OF HYDROGEN AND HELIUM GAS BETWEEN 90 DEGREES AND 14 DEGREES K.
VAN AKE,F.P.G.A.J. ONNES,H.K.
REDSTONE SCI. INFORM. CENTER, ARMY MISSILE COMM., HUNTSVILLE, ALA., TRANS. NO. RSIC-39 (JUN 1963) 14 PP (TRANS. FROM VERSLAG. GEWONE VERGADER AFDEL. NATUURK. KONINKL. NED. AKAD. WETENSCHAP. VOL. 34, 425-37, 1925)
NASA NEJ 212030 A3 B1 C6 D1 E1 F3-66 Z5
•HYDROGEN, •HELIUM, •GASEOUS, •PVT DATA, COMPRESSIBILITY FACTOR, ISOTHERM, •EQUATION OF STATE, SECOND VIRIAL COEFFICIENT

21079 PHYSICS. THE STRAIGHT-LINE DIAMETER OF HYDROGEN.
MATHIAS,E. CROMMELIN,C.A. ONNES,H.K.
REDSTONE SCI. INFORM. CENTER, REDSTONE ARSENAL, ALA., TRANS. NO. RSIC 19 (JUN 1963) 3 PP (TRANS. FROM COMM. KAMERL. ONDERZ. VOL. 122, 261-63, 1911)
ODC AD 411 351 A3 B1 C6 D1 E1 F5 G6 Z1
•HYDROGEN, •GASEOUS, •LIQUID, •DENSITY, SATURATED VAPOR, SATURATED LIQUID, LAW OF RECTILINEAR DIAMETERS

21123 THE VELOCITY OF ORDINARY SOUND IN LIQUID HELIUM IN THE VICINITY OF THE LAMBDA POINT.
CHASE,C.E. (MIT, LINCOLN LAB.)
LOW TEMPERATURE PHYSICS AND CHEMISTRY, 73-78 (PROC. 5TH INTERN. CONF., 1957, J.R. DILLINGER, ED.) UNIV. OF WISCONSIN PRESS, MADISON (1958) 2 FIG 4 REF
A2 B1 C5 D3 E2 F6 G2 Z8
•HELIUM, •LIQUID, LAMBDA TEMPERATURE, THEORY, •VELOCITY OF SOUND, SOUND ABSORPTION, •PHYSICAL PROPERTY

21126 VAPOR PRESSURES OF NORMAL SATURATED HYDROCARBONS.
THODOS,GEORGE (NORTHWESTERN TECHNOL. INST., EVANSTON, ILL.)
IND. ENG. CHEM. VOL. 42, 1514-26 (AUG 1950) 15 FIG 6 TAB 94 REF
A3 B1 C7 D3 E3 F6 G1 50
•METHANE, •ETHANE, •PROPANE, •BUTANE, •HYDROCARBON, PARAFFIN CLASS, •LIQUID, •VAPOR PRESSURE, HEPTANE, PENTANE, EQUATION, CALCULATION, COMPILATION, •CRITICAL POINT

21127 GENERALIZED THERMODYNAMIC PROPERTIES OF HIGHER HYDROCARBON VAPORS.
COPE,J.O. LEWIS,W.K. WENER,H.G. (MIT, CAMBRIDGE)
IND. ENG. CHEM. VOL. 23, 887-92 (AUG 1931) 7 FIG 2 TAB 12 REF
A3 B1 C6 D1 E3 F6 G1 31
•ETHANE, •PROPANE, •BUTANE, •HYDROCARBON, PENTANE, HEPTANE, PARAFFIN CLASS, •LIQUID, •VAPOR PRESSURE, SATURATED VAPOR, CALCULATION, •REDUCED VARIABLE

21132 PHYSICO-CHEMICAL FACTORS IN HIGH-PRESSURE DESIGN.
DODGE,B.F. (YALE UNIV., NEW HAVEN, CONN.)
IND. ENG. CHEM. VOL. 24, 1353-63 (DEC 1932) 4 FIG 3 TAB 56 REF
A3 B1 C1 D1 E2 F6 G1 32
•CARBON DIOXIDE, •NITROGEN, •HYDROGEN, •AMMONIA, •GASEOUS, •PVT DATA, •EQUATION OF STATE, COMPRESSIBILITY FACTOR, •REDUCED VARIABLE, ETHYLENE, •SPECIFIC HEAT, HIGH PRESSURE, CALCULATION

21133 FUNDAMENTAL DESIGN OF HIGH PRESSURE EQUIPMENT INVOLVING PARAFFIN HYDROCARBONS. I. PRESSURE-VOLUME-TEMPERATURE RELATIONS OF PARAFFIN HYDROCARBONS.
BROWN,G.G. SOUDERS,M.,JR. SMITH,R.L. (UNIV. MICHIGAN, ANN ARBOR)
IND. ENG. CHEM. VOL. 24, 513-19 (MAY 1932) 5 FIG 2 TAB 9 REF
A3 B1 C7 D3 E3 F6 G1 32
•METHANE, •ETHANE, •PROPANE, •BUTANE, ISOBUTANE, •HYDROCARBON, HEPTANE, PENTANE, PARAFFIN CLASS, •GASEOUS, •PVT DATA, •REDUCED VARIABLE, •EQUATION OF STATE, CLACULATION

21134 THE CRITICAL PROPERTIES OF ELEMENTS AND COMPOUNDS.
KOBE,K.A. LYNN,R.E.,JR. (B.F. GOODRICH RES. CENTER, BRECKSVILLE, OHIO)
CHEM. REV. VOL. 52, 117-236 (1953) 12 FIG 22 TAB 192 REF
A3 B1 C5 D1 E2 F6 G1 53
•CRITICAL CONSTANTS, COMPILATION, •HELIUM, HELIUM 3, HELIUM 4, •NEON, •ARGON, •KRYPTON, •XENON, •HYDROGEN, •PARAHYDROGEN, •HYDROGEN DEUTERIDE, •DEUTERIUM, •NITROGEN,
A3 B1 C5 D1 E2
•CRITICAL CONSTANTS, COMPILATION, •OXYGEN, •OZONE, •METHANE, •CARBON MONOXIDE, •CHLORINE, •BROMINE, •IODINE, •HYDROCARBON, •ORGANIC FLUID, •INORGANIC FLUID, •ETHYLENE, •ETHANE

21135 THE T62(HE3) TEMPERATURE SCALE. I. NEW VAPOR PRESSURE COMPARISONS.
SYDORIAK,S.G. SHERMAN,R.H.
LOS ALAMOS SCI. LAB., N. MEX., REPT. NO. LADC-5711 (1962)
CONTR. NO. W7405-ENG-36, 51 PP 7 FIG 3 TAB (IN U. S. GOV. RES. REPTS. VOL. 38, NO. 24, 5-6, DEC 1963)
A3 B1 C4 D1 E1 F3 G5 62
•HELIUM, HELIUM 3, HELIUM 4, •LIQUID, •VAPOR PRESSURE, VAPOR PRESSURE DIFFERENCE, TEMPERATURE SCALE, •CRITICAL CONSTANT, CRITICAL PRESSURE,
A6 B1 C4 D1 E1
•COPPER, RAPEIZA RESISTANCE,
A7 B1 C4 D1 E1

21136 SOME PROPERTIES OF SOLID HYDROGEN AT SMALL MOLAR VOLUMES.
AHLERS,GUENTER
CALIF. UNIV., LAWRENCE RAD. LAB., BERKELEY, CALIF., REPT. NO. UCRL-10757 (SEPT 1963) CONTR. NO. W-7405-ENG-48, 133 PP (PH. D. THESIS)
A3 B1 C5 D1 E1 F4 G5 63
•HYDROGEN, •SOLIDIFIED GAS, •SPECIFIC HEAT, •ENTROPY, SOLID-SOLID TRANSITION, •THERMAL EXPANSION, •DENSITY, MOLAR VOLUME, •PARAHYDROGEN, MELTING POINT, GRUNEISEN PARAMETER, DEBYE CONSTANT, LATTICE SPECIFIC HEAT,
A6 B1 C5 D1 E1
ORTHO-PARA CONVERSION, HYDROGEN, SOLID,
A2 B1 C5 D1 E1

21176 COPPER, •SPECIFIC HEAT
21210 See Appendix

21281 EXPERIMENTAL STUDY OF THE VELOCITY OF SOUND IN ARGON ALONG THE LINES OF SATURATION.
RADCVSKII,I.S.
ZH. PRIKL. MEKHAN. I TEKHN. FIZ., NO. 3, 159-62 (1963) 3 FIG 1 TAB 7 REF
PF NO. 203-X A3 B1 C7 D1 E1 F7 G1 63
•ARGON, •LIQUID, •GASEOUS, SATURATED VAPOR, SATURATED LIQUID, •VELOCITY OF SOUND

21305 THE VISCOSITY OF DISSOCIATED AND UNDISSOCIATED GASES FOR TEMPERATURES UP TO 10,000 DEGREES K.
MASLEN,S.H. THODOS,G. (NORTHWESTERN UNIV., EVANSTON, ILL.)
A.I.CH.E. JOURNAL VOL. 5, NO. 5, 596-99 (SEPT 1963) 5 FIG 19 REF
A3 B1 C1 D3 E3 F6 G1 63
•HELIUM, •NEON, •ARGON, •KRYPTON, •XENON, CRITICAL TEMPERATURE, CRITICAL PRESSURE, •GASEOUS, TEMPERATURE EFFECT, •VISCOSITY, •REDUCED VARIABLE, •HYDROGEN, •OXYGEN, •NITROGEN

21337 THE MOLAR VOLUME AND EXPANSION COEFFICIENT OF LIQUID HE4.
KERR,E.C. TAYLOR,R.C. (LOS ALAMOS SCI. LAB., N. MEX.)
ANN. PHYS. N. Y. VOL. 26, NO. 2, 292-306 (FEB 1964) 6 FIG 1 TAB 29 REF
PF NO. 223 A3 B1 C4 D1 E1 F6 G1 64
•HELIUM, •LIQUID, •EXPANSIVITY, •DENSITY, MOLAR VOLUME, LAMBDA TEMPERATURE, •SPECIFIC HEAT

21338 THE THERMAL CONDUCTIVITY OF NONPOLAR SUBSTANCES IN THE DENSE GASEOUS AND LIQUID REGIONS.
STIEL,L.I. THODOS,G. (NORTHWESTERN UNIV., EVANSTON, ILL.)
A.I.CH.E. JOURNAL VOL. 10, NO. 1, 26-30 (JAN 1964) 2 FIG 1 TAB 62 REF
A3 B1 C1 D1 E2 F6 G1 64
•THERMAL CONDUCTIVITY, •LIQUID, •GASEOUS, •ARGON, •KRYPTON, •XENON, •NITROGEN, •OXYGEN, •CARBON MONOXIDE, •METHANE, COMPRESSIBILITY FACTOR, •HYDROCARBON, •CARBON DIOXIDE

21403 VAPOR PRESSURES OF THE LIGHT NORMAL SATURATED HYDROCARBONS.
PERRY,R.E. THODOS,G. (NORTHWESTERN UNIV., EVANSTON, ILL.)
IND. ENG. CHEM. VOL. 44, NO. 7, 1649-58 (JUL 1952) 8 FIG 5 TAB 27 REF
A3 B1 C7 D1 E3 F6 G1 52
•VAPOR PRESSURE, •HYDROCARBON, •METHANE, •ETHANE, •PROPANE, EQUATION, •LIQUID, •LIQUID

21409 A NEW THERMODYNAMIC CRITERION AT THE CRITICAL POINT OF MATTER.
PLANK,R. RIEDEL,L. (INST. OF TECHNOLOGY, KARLSRUHE, GER.)
TEXAS J. SCI. VOL. 1, NO. 3, 86-99 (1949)
PF NO. 220 A3 B1 C1 D1 E3 F6 G1 49
•VAPOR PRESSURE, •CRITICAL REGION, •LIQUID, TEMPERATURE EFFECT, •CARBON MONOXIDE, •NITROGEN, •OXYGEN, •ARGON, •NEON, •HYDROGEN, EQUATION, •ETHYLENE, •AMMONIA, •CARBON DIOXIDE

21414 AN APPARATUS FOR PHASE STUDIES BETWEEN 20 DEGREES K. AND 300 DEGREES K.
DAVIS,J.A. ROSENBALD,W. KURATA,F.
IND. ENG. CHEM. VOL. 55, NO. 11, 35-42 (NOV 1963)
EI 64 9892 A3 B1 C6 D1 E1 F6 G1 63
•GASEOUS MIXTURE, •LIQUID MIXTURE, DEW POINT, •PVT DATA, •PHASE EQUILIBRIUM, •BINARY SYSTEM, •HELIUM, LIQUID-VAPOR EQUILIBRIUM, •NITROGEN,
A3 B1 C7 D1 E1
COMPRESSIBILITY FACTOR, •GASEOUS MIXTURE, •LIQUID MIXTURE, SATURATED VAPOR,
A7 B1 C6 D1 E1

21433 MULTIPHASE AND VOLUMETRIC EQUILIBRIUMS OF THE METHANE-N-OCTANE SYSTEM AT TEMPERATURES BETWEEN -110 DEGREES AND 150 DEGREES.
KOHN,J.P. BRADISH,W.F. (UNIV. OF NOTRE DAME, NOTRE DAME, IND.)
J. CHEM. ENG. DATA VOL. 9, NO. 1, 5-8 (1964)
CA 60 7505A A3 B1 C6 D E1 F6 G1 64
•BINARY SYSTEM, •METHANE, OCTANE, •PHASE EQUILIBRIUM, •LIQUID MIXTURE, •GASEOUS-MIXTURE, •DENSITY, SOLID-LIQUID EQUILIBRIUM, SOLID-VAPOR EQUILIBRIUM, LIQUID-VAPOR EQUILIBRIUM

21583 THE VIRIAL COEFFICIENTS OF THE CARBON DIOXIDE-ETHYLENE SYSTEM. I. PURE GASES.
BUTCHER,E.G. DAWSON,R.S. (NATL. PHYS. LAB., TEDDINGTON, ENGL.)
PROC. ROY. SOC. (LONDON) VOL. A277, 448-67 (1964)
CA 60 6220 A3 B1 C6 D E1 F6 G1 64
•GASEOUS MIXTURE, •CARBON DIOXIDE, •ETHYLENE, •EQUATION OF STATE, SECOND VIRIAL COEFFICIENT, LENNARD-JONES FUNCTION

21618 THE VISCOSITY OF LIGHT HYDROCARBON MIXTURES AT HIGH PRESSURES. THE METHANE-PROPANE SYSTEM.
GIDDINGS,J.G.
RICE UNIV., HOUSTON, TEX., PH. D. THESIS (1963) 202 PP (ABSTR. IN DISSERTATION ABSTR. VOL. 24, 3247-48; FEM 1964) (AVAIL. UNIVERSITY MICROFILMS, ANN ARBOR, MICH., ORDER NO. 63-7161, PF $2.75, XEROX $9.25)
A3 B1 C2 D E1 F9 G7 63
•GASEOUS MIXTURE, •LIQUID MIXTURE, •METHANE, •PROPANE, •VISCOSITY, •BINARY SYSTEM, LIQUID-VAPOR EQUILIBRIUM

21696 GRAPHIC ANALYSIS OF P-V-T RELATIONS OF SOME LIQUID NORMAL ALKANES.
KADYROV,N.K. YUSINOVA,A.D. GABIBOV,A.N.
IZV. AKAD. NAUK AZERB. SSR, SER. FIZ.-MAT. I TEKHN. NAUK VOL. 1963, NO. 4, 85-97
CA 60 3508C A3 B7 C6 D C1 F7 G1 63
•ETHANE, •PROPANE, •BUTANE, •PVT DATA, •LIQUID, •COMPRESSIBILITY, ISOBAR, EQUATION OF STATE

21695 MORSE POTENTIAL PARAMETERS FOR HELIUM.
BARTHI,U.P. SAXENA,S.C. (RAJASTHAN UNIV., JAIPUR, INDIA)
PHYS. FLUIDS VOL. 6, NO. 12, 1774-75 (1963)
CA 60 3508G A3 B1 C1 D E3 F7 G1 63
•HELIUM, •GASEOUS, INTERMOLECULAR FORCE, MORSE FUNCTION, SECOND VIRIAL COEFFICIENT, VISCOSITY, •EQUATION OF STATE

21696 SECOND VIRIAL COEFFICIENT OF GASES AND GASEOUS MIXTURES ON THE MORSE POTENTIAL.
SAXENA,S.C. GAMBHIR,R.S. (UNIV. RAJASTHAN, INDIA)
MOL. PHYS. VOL. 6, NO. 6, 577-83 (1963)
CA 60 3508E A3 B1 C1 D E3 F7 G1 63
•GASEOUS MIXTURE, •NEON, •ARGON, •KRYPTON, •BINARY SYSTEM, •EQUATION OF STATE, INTERMOLECULAR FORCE, MORSE FUNCTION, CALCULATION,
A3 B1 C1 D E3
•GASEOUS MIXTURE, •ARGON, •METHANE, •BINARY SYSTEM, •EQUATION OF STATE, INTERMOLECULAR FORCE, MORSE FUNCTION, CALCULATION

21747 See Appendix

21790 THE TEMPERATURE VARIATION OF SOME THERMODYNAMIC QUANTITIES.
MURPHY, G.M. (YALE UNIV., NEW HAVEN, CONN.)
J. CHEM. PHYS. VOL. 5, 637-41 (AUG 1937) 3 FIG 3 TAB 10 REF
A3 B1 C6 D1-E3 F6 G1 37
ZERO POINT ENERGY, •HYDROGEN, EQUATION, •DEUTERIUM, •HYDROGEN DEUTERIDE, •FREE ENERGY, •ENTHALPY, •SPECIFIC HEAT, •ENTROPY, •INORGANIC FLUID, •GASEOUS, DEUTERO COMPOUND

21754 DETERMINATION OF THE BOILING AND TRIPLE POINTS OF EQUILIBRIUM HYDROGEN AND ITS VAPOR PRESSURE-TEMPERATURE RELATION.
BARBER,C.R. MORSEGRD,A. (NATL. PHYS. LAB., TEDDINGTON, ENGL.)
BRIT. J. APPL. PHYS. VOL. 14, NO. 12, 920-2 (1963) 3 FIG 3 TAB 13 REF
CA 60 380 A3 B1 C6 D1 E1 F7 G1 63
•PARAHYDROGEN, •BOILING POINT, •TRIPLE POINT, •VAPOR PRESSURE, •LIQUID, EQUATION

21755 A SMALL ANGLE X-RAY SCATTERING STUDY OF ARGON NEAR THE CRITICAL POINT.
THOMAS,J.E.,JR.
MISSOURI UNIV., COLUMBIA, PH. D. THESIS (1963) 88 PP
(ABSTR. IN DISSERTATION ABSTR. VOL. 24, NO. 8, 3377, FEB 1964) (AVAIL. UNIVERSITY MICROFILMS, ANN ARBOR, MICH., ORDER NO. 64-1730, MF $2.25, XEROX $4.60)
A3 B1 C6 D1 E1 F5 G7 63
•ARGON, •COMPRESSIBILITY, X-RAY, SCATTERING, •CRITICAL REGION, ISOTHERM

21757 VISCOSITY OF HYDROGEN, DEUTERIUM, METHANE, AND CARBON MONOXIDE FROM MINUS 50 DEGREES C TO 150 DEGREES C BELOW 200 ATMOSPHERES.
BARUA,A.K. HOSS,J. AFZAL,M.
BROWN UNIV., METCALF CHEM. LABS., PROVIDENCE, R.I., TECH. REPT. NO. BRN-10-P (JAN 1964) CONTR. NO. NONR 3623(00), NR-098-038, 18 PP 4 FIG 5 TAB 17 REF
NASA N64 15762 A3 B1 C6 D1 E1 F3 G5 64
•VISCOSITY, •GASEOUS, •HYDROGEN, •DEUTERIUM, •METHANE, •CARBON MONOXIDE, DENSITY

21794 COMPRESSIBILITY ISOTHERMS AND THERMODYNAMIC FUNCTIONS OF HYDROGEN AND DEUTERIUM. CONCLUSIONS REGARDING THE INTERMOLECULAR FIELD.
DE GRAAFF,W.
AMSTERDAM UNIV., NETHERLANDS, PH. D. THESIS (1960) 96 PP
A3 B1 C7 D1 E1 F9 G7 60
•HYDROGEN, •DEUTERIUM, •GASEOUS, •PVT DATA, COMPRESSIBILITY FACTOR, ISOTHERM, •DENSITY, •EQUATION OF STATE, VIRIAL COEFFICIENT, SECOND VIRIAL COEFFICIENT, THIRD VIRIAL COFFICIENT, INTERMOLECULAR FORCE,
A3 B1 C7 D1 E1
•HYDROGEN, •DEUTERIUM, •GASEOUS, CALCULATION, •INTERNAL ENERGY, •ENTROPY, •FREE ENERGY, •ENTHALPY, •SPECIFIC HEAT, •VELOCITY OF SOUND, •JOULE-THOMSON COEFFICIENT

21802 PROPOSED NOMENCLATURE FOR HELIUM ALLOTROPES.
DAUNT,J.G. SCHUCH,A.F. MILLS,R.L.
PHYS. TODAY VOL. 17, NO. 1, 52-51 (JAN 1964) 2 FIG 1 TAB 9 REF
A3 B1 C2 D3 E2 F6 G1 64
•HELIUM, HELIUM 3, HELIUM 4, •SOLIDIFIED GAS, SOLID-SOLID TRANSITION

21805 THE MELTING LINE AND INTERMOLECULAR POTENTIAL OF ARGON FROM SHOCK COMPRESSION.
ALDER,B.J. VAN THIEL,M. (UNIV. OF CALIFORNIA, BERKELEY)
PHYS. LETTERS VOL. 7, NO. 5, 317-19 (DEC 1963) 2 FIG 22 REF
CA 60 3498H A3 B1 C7 D3 E1 F7 G1 63
•ARGON, •SOLIDIFIED GAS, •MELTING CURVE, SHOCK WAVE, •LIQUID

21806 LAMBDA ANOMALY IN THE HEAT CAPACITY OF SOLID HYDROGEN AT SMALL MOLAR VOLUMES.
AHLERS,G. CRITUNG,W.H. (LAWRENCE RAD. LAB., UNIV. CALIF., BERKELEY)
PHY. REV. VOL. 133, NO. 6A, A1642-50 (MAR 1964) 13 FIG 23 REF
A3 B1 C5 D3 E1 F6 G1 64
•HYDROGEN, •SOLIDIFIED GAS, •SPECIFIC HEAT, •CRTHO-PARA HYDROGEN, ANOMALY

21824 THE SOLIDIFIED INERT GASES.
BOATO,G. (INSTITUTO DI FISICA DELL'UNIVERSITA, GENOA, ITALY)
CRYOGENICS VOL. 4, NO. 2, 65-75 (APR 1964) 6 TAB 8 FIG 73 REF
A3 B1 C1 D1 E2 F7 G1 64
•HEAT OF VAPORIZATION, •HYDROGEN, •NEON, •ARGON, •KRYPTON, •XENON, •NITROGEN, •OXYGEN, •LIQUID, •TRIPLE POINT, •DENSITY, •SOLIDIFIED GAS, •PHASE TRANSITION PROPERTY, •HEAT OF SUBLIMATION,
A6 B1 C1 D1 E2
•SOLID, •HELIUM, •NEON, •ARGON, •KRYPTON, •XENON, •HYDROGEN, •DEUTERIUM, INTERMOLECULAR FORCE, LENNARD-JONES FUNCTION, DEBYE TEMPERATURE, ZERO POINT ENERGY, •CRYSTALLOGRAPHY, MOLAR VOLUME,
A3 B1 C1 D1 E2
•ARGON, •SOLIDIFIED GAS, •SPECIFIC-HEAT, •EXPANSIVITY

21853 THERMODYNAMIC PROPERTIES OF HYDROGEN AND DEUTERIUM AT TEMPERATURES BETWEEN -175 DEGREES C AND 150 DEGREES C AND AT PRESSURES UP TO 2500 ATMOSPHERES.
MICHELS,A. DE GRAAFF,W. WOLKERS,C.J.
APL. SCI. RESEARCH VOL. A12, NO. 1, 9-32 (1963) 23 TAB 4 REF (VAN DER WAALS FUND PUBL. NO. 174)
A3 B1 C7 D1 E2 F7 G1 63
•HYDROGEN, •DEUTERIUM, •PVT DATA, •INTERNAL ENERGY, •ENTROPY, •FREE ENERGY, •ENTHALPY, •SPECIFIC HEAT, •VELOCITY OF SOUND, •JOULE-THOMSON COEFFICIENT, •GASEOUS, COMPRESSIBILITY FACTOR, ISOTHERM

21872 RESEARCH ON RHEOLOGIC AND THERMODYNAMIC PROPERTIES OF SOLID AND SLUSH HYDROGEN.
DWYER,R.F. COOK,G.A.
LINDE CO., TONAWANDA, N. Y., QUART. REPT. NO. 1 (SEPT 1963) CONTR. NO. AF33(657)-11098, 29 PP 6 FIG 2 TAB 19 REF
NASA N64 13C01 A3 B1 C6 D1 E2 F3 G5 63
•PARAHYDROGEN, •HEAT OF FUSION, CALCULATION, COMPILATION, •SOLIDIFIED GAS, •DENSITY, •MELTING CURVE

21954 THERMODYNAMIC PROPERTIES OF CH4 AND CD4.
COLWELL,J.H. GILL,E.K. MORRISON,J.A.
J. CHEM. PHYS. VOL. 40, NO. 7, 2041-42 (APR 1964) 1 TAB 4 REF
MF NO. 338 A3 B1 C7 D1 E1 F6 G1 64
•METHANE, DEUTERO-METHANE, •LIQUID, •HEAT OF VAPORIZATION, CORRECTION, •ENTROPY, •HEAT OF SUBLIMATION

21955 THERMAL CONDUCTIVITY AND VISCOSITY OF CARBON DIOXIDE. THE CORRELATION AT EXPERIMENTAL DATA TO COVER THE RANGES 0-1100 DEGREES C AND 15-1000 LB/ IN 2 ABS.
SULLIVAN,K.
UNITED KINGDOM ATOMIC ENERGY AUTHORITY, REACTOR GROUP, RISLEY, ENGL., REPT. NO. (RG-438 (1963) 42 PP 10 FIG 4 TAB 165 REF
A3 B1 C6 D1 E2 F3 G5 63
•CARBON DIOXIDE, •GASEOUS, •VISCOSITY, •THERMAL CONDUCTIVITY, PRESSURE EFFECT, COMPILATION

21990 PHENOMENA ALONG THE HCP-BCC TRANSITION LINE OF HE3 AND HE4.
SCHUCH,A.F. OVERTON,W.C.,JR. BROUT,R.
PHYS. REV. LETTERS VOL. 10, NO. 10, 429-31 (MAY 1963) 1 FIG 1 TAB 12 REF
MF NO. 259 A3 B1 C5 D3 E3 F6 G1 63
•HELIUM, HELIUM 3, HELIUM 4, •SOLIDIFIED GAS, SOLID-SOLID TRANSITION, DEBYE CONSTANT, •PHASE TRANSITION PROPERTY, PRESSURE EFFECT

22007 PROPERTIES OF ADSORBED HELIUM.
FREEDRIKSE,H.P.R. (LEIDEN)
PROC. INTERN. CONF. PHYSICS VERY LOW TEMP., MASS. INST. TECHNOL., CAMBRIDGE, 28-29 (SEPT 1949)
A6 B1 C5 D2 E1 F6 G2 49
•SORPTION, ADSORPTION, ADSORPTION ISOTHERM, HELIUM, STEEL,
A3 B1 C5 D2 E1
•HELIUM, ADSORPTION •SPECIFIC HEAT

22009 THE LIQUID-SOLID TRANSFORMATION IN HELIUM NEAR THE LAMBDA-POINT.
SWENSON,C.A. (CLARENDON LABORATORY, OXFORD)
PROC. INTERN. CONF. PHYSICS VERY LOW TEMP., MASS. INST. TECHNOL., CAMBRIDGE, 37 (SEPT 1949)
A3 B1 C5 D2 E1 F6 G2 49
•HELIUM, •HEAT OF FUSION, •SOLIDIFIED GAS, •MELTING CURVE, LAMBDA TEMPERATURE

22010 PROPERTIES OF THE LIGHT HELIUM ISOTOPE.
DE BOER,J. (AMSTERDAM)
PROC. INTERN. CONF. PHYSICS VERY LOW TEMP., MASS. INST. TECHNOL., CAMBRIDGE, 38-41 (SEPT 1949)
A3 B1 C5 D1 E3 F6 G2 49
•HELIUM, HELIUM 3, •VAPOR PRESSURE, •DENSITY, TEMPERATURE EFFECT, HELIUM 4, •LIQUID

22052 ULTRASONICS AT LOW TEMPERATURES AND OTHER TOPICS.
VAN ITTERBEEK,A. (LABORATORY FOR LOW TEMPERATURES, LOUVAIN)
PROC. INTERN. CONF. PHYSICS VERY LOW TEMP., MASS. INST. TECHNOL., CAMBRIDGE, 120 (SEPT 1949)
A3 B1 C6 D1 E1 F6 G2 49
•VELOCITY OF SOUND, •OXYGEN, •ARGON, •NITROGEN, •METHANE, •HYDROGEN, •PARAHYDROGEN, •LIQUID,
A3 B1 C6 D1 E1
•TRANSPORT PROPERTY, DIFFUSION, •BINARY SYSTEM, •HYDROGEN, •ARGON, •DEUTERIUM, •HELIUM, •OXYGEN, •NITROGEN

22219 SURFACE TENSION OF DEUTEROHYDROGEN.
GRIGORIEV,F.N. (PHYS. TECH. INST., ACAD. SCI. UKR. S.S.R., KIEV)
ZHUR. EKSPTL. I TEORET. FIZ. VOL. 45, NO. 2, 58-100 (1963)
2 FIG 1 TAB 8 REF
CA 60 11378 MF NO. 402 A3 B7 C6 D1 E1 F7 G1 63
•HYDROGEN DEUTERIDE, •LIQUID, •SURFACE TENSION, TEMPERATURE EFFECT, EQUATION

22228 COEFFICIENT OF THERMAL EXPANSION, REDUCED STATE CORRELATION FOR THE GASEOUS AND LIQUID STATES OF PURE SUBSTANCES HAVING SIMPLE MOLECULAR STRUCTURE.
DAMASIUS,G. THODOS,G.
CHEM. ENG. PROGR. SYMP. SER. VOL. 59, 42-45 (1963)
CA 59 4572H MF NO. 202-C A3 B1 C7 D3 E2 F6 G1 63
•ARGON, •PVT DATA, •EXPANSIVITY, •REDUCED VARIABLE, •GASEOUS, •LIQUID, THERMAL EXPANSION, •DENSITY

22234 ON THE PROPAGATION OF ULTRA-SOUND WAVES IN COMPRESSED NITROGEN.
GLIASKIY,A.A.
FOREIGN TECH. DIV., AF SYSTEMS COMMD., WRIGHT-PATTERSON AFB, OHIO; TRANS. OF ABSTR. REFERAT. ZH. FIZ. NO. 1, P. 73, ABSTR. 12K436, (1963)
ODC AD 412 204 A3 B1 C8 D2 E3 F5 G6 63
•GASEOUS, •NITROGEN, •VELOCITY OF SOUND, PRESSURE EFFECT, TEMPERATURE EFFECT

22235 ON THE PROPAGATION OF ULTRA-SOUND WAVES AT TEMPERATURES NEAR THE CRITICAL ONE.
GLIASKIY,A.A.
FOREIGN TECH. DIV., AF SYSTEMS COMMD., WRIGHT-PATTERSON AFB, OHIO; TRANS. OF ABSTR. REFERAT. ZH. FIZ. NO. 1, P. 72, ABSTR. 12K431, (1963)
ODC AD 412 206 A3 B1 C7 D2 E3 F5 G6 63
•NITROGEN, •GASEOUS, HIGH PRESSURE, SHOCK WAVE, •CRITICAL REGION, •VELOCITY OF SOUND, TEMPERATURE EFFECT

22237 UBER DIE INVERSION DES JOULE-EFFEKTS. THE INVERSION IN THE JOULE EFFECT.
SCHABER,A.
ALLGEM. WARMETECH. VOL. 11, NO. 8-9, 146-49 (1963) 1 FIG 1 TAB 1 REF
CNRS 24-3-17336 MF NO. 334 A3 B3 C1 D1 E2 F7 G1 63
•HELIUM, •NEON, •HYDROGEN, •DEUTERIUM, •JOULE-THOMSON COEFFICIENT, INVERSION CURVE, •GASEOUS

22241 MOLAL VOLUMES AND ZERO-POINT ENERGIES OF THE ISOTOPIC LIQUID HYDROGENS.
BIGELEISEN,J. (EIDG. TECH. HOCHSCHULE, ZURICH, SWITZ.)
J. CHEM. PHYS. VOL. 34, NO. 5, 1356-57 (1963) 1 FIG 2 REF
CA 59 14599H MF NO. 206-K A3 B1 C6 D3 E3 F6 G1 63
•HYDROGEN, •DEUTERIUM, •TRITIUM, ZERO POINT ENERGY, •DENSITY, MOLAL VOLUME

22243 SIGNIFICANT STRUCTURE THEORY OF LIQUIDS.
EYRING,H. MARCHI,R.P. (UNIV. OF UTAH, SALT LAKE CITY)
J. CHEM. EDUC. VOL. 40, NO. 11, 562-72 (1962) 10 FIG 6 TAB 14 REF
CA 60 1132G MF NO. 483 A3 B1 C1 D1 E3 F6 G1 63
•LIQUID, •ARGON, •NITROGEN, •METHANE, •SURFACE TENSION, •VISCOSITY, THEORY,
A3 B1 C1 D1 E3
•HYDROGEN, NORMAL HYDROGEN, •PARAHYDROGEN, •HYDROGEN DEUTERIDE, •DEUTERIUM, ORTHODEUTERIUM, •LIQUID, •DENSITY, •TRIPLE POINT, •BOILING POINT, •CRITICAL CONSTANT, •VAPOR PRESSURE, •THERMODYNAMIC PROPERTY,
A3 B1 C1 D1 E3
•ARGON, •KRYPTON, •XENON, •METHANE, •LIQUID, •DENSITY, •TRIPLE POINT, •BOILING POINT, •CRITICAL CONSTANT, •THERMODYNAMIC PROPERTY

22249 THE VISCOSITY OF THE ISOTOPES OF HYDROGEN AND THEIR INTERMOLECULAR FORCE POTENTIALS.
KESTIN,J. NAGASHIMA,A.
BROWN UNIV., •PROVIDENCE, R. I., TECH. REPT. BRN-11-P (DEC 1963) CONTR. NO. NONR 3623(00), NR-098-038, 23 PP 3 FIG 7 TAB 11 REF
DDC AD 429 501 A3 B1 C6 D1 E1 F5 G5 63
•HYDROGEN, •DEUTERIUM, •HYDROGEN DEUTERIDE, •GASEOUS, •VISCOSITY, INTERMOLECULAR FORCE, PRESSURE EFFECT

22250 VAPOR PRESSURES, THE SATURATED ALIPHATIC HYDROCARBONS.
SONDAK,N.E. THODOS,G. (NORTHWESTERN UNIV., EVANSTON, ILL.)
A.I.CH.E. JOURNAL VOL. 2, 367-73 (1956) 3 FIG 5 TAB 61 REF
PF NO. 296 A3 M1 C7 D1 E3 F6 G1 56
*VAPOR PRESSURE, *LIQUID, EQUATION, CALCULATION, *METHANE, *ETHANE, *PROPANE, *BUTANE, *HYDROCARBON, *ORGANIC FLUID, TRIPLE POINT-TO-CRITICAL POINT

22251 LES CHALEURS SPECIFIQUES DES GAZ ET L'EQUIVALENT MECANIQUE DE LA CALORIE. THE SPECIFIC HEAT OF GASES AND THE MECHANICAL EQUIVALENT OF THE CALORIES.
LECLC,M.A.
ANN. CHIM. ET PHYS. VOL. 17, 484-510 (1899)
PF NO. 310 A3 M2 C6 D1 E1 F7 G1 94
*AIR, *GASEOUS, *SPECIFIC HEAT, *CARBON MONOXIDE, *CARBON DIOXIDE, *HYDROGEN, NITRIC OXIDE, NITROUS OXIDE

22299 ON PROPERTIES OF LIQUID HELIUM 4.
HAEFER,R.A.
SULZER TECH. REV. VOL. 45, NO. 3, 126-38 (1963) 24 FIG 32 REF
E1 64 15423 A3 B1 C4 D3 E2 F7 G1 63
*HELIUM, HELIUM-4, *PHASE DIAGRAM, *LIQUID, LAMBDA TEMPERATURE, *SPECIFIC HEAT, *ENTROPY, *VISCOSITY, *VELOCITY OF SOUND, *THERMAL CONDUCTIVITY, SUPERFLUID

22318 VELOCITY OF SOUND IN LIQUID HYDROGEN AT LOW PRESSURES.
REEC,K.D. HENDERSON,C. (UNIV. OF WATERLOO, ONTARIO, CAN.)
AUSTRALIAN J. CHEM. VOL. 17, NO. 6, 705-06 (JUN 1964) 1 FIG 7 REF
A3 B1 C6 D3 E3 F7 G1 64
*HYDROGEN, *LIQUID, *VELOCITY OF SOUND, CALCULATION, ZERO PRESSURE

22425 QUANTUM-MECHANICAL CALCULATION OF THE SECOND VIRIAL-COEFFICIENT OF HELIUM AT LOW TEMPERATURES.
DE BOER,J. MICHELS,A.
PHYSICA VOL. 6, NO. 5, 409-20 (MAY 1939) 3 FIG 3 TAB 10 REF
A3 B1 C5 D1 E3 F6 G1 39
*HELIUM, *EQUATION OF STATE, SECOND VIRIAL COEFFICIENT, CALCULATION, INTERMOLECULAR FORCE, TEMPERATURE EFFECT, QUANTUM EFFECT

22426 DIELECTRIC CONSTANTS OF LIQUEFIED NOBLE GASES AND METHANE.
AMEY,R.L. COLE,R.H. (BROWN UNIV., PROVIDENCE, R.I.)
J. CHEM. PHYS. VOL. 40, NO. 1, 146-49 (1964) 1 TAB 12 REF
CA 60 2409C A3 B1 C7 D1 E1 F6 G1 64
*ARGON, *KRYPTON, *XENON, *METHANE, *LIQUID, *SOLIDIFIED GAS, *DIELECTRIC CONSTANT, CLAUSIUS-MOSSOTTI RELATION, MELTING POINT, DENSITY

22428 THE VAPOR PRESSURES OF O- AND P-H2 AND D2.
COHEN,K. URLY,H.C.
J. CHEM. PHYS. VOL. 7, 438 (1939) 5 REF
A3 B1 C6 D1 E3 F6 G1 59
*ORTHOHYDROGEN, *PARAHYDROGEN, *DEUTERIUM, ORTHODEUTERIUM, PARADEUTERIUM, *HEAT OF SUBLIMATION, VOLUME CHANGE, CALCULATION

22429 AN ATTEMPT TO MEASURE THE THERMAL CONDUCTIVITY OF LIQUIDS, GASES, AND VAPORS WITH A HIGH DEGREE OF ACCURACY OVER WIDE RANGES OF TEMPERATURE (-180 TO 900 DEGREES C) AND PRESSURE (VACUUM TO 900 ATM)
LEIDENFROST,W.
INTERN. J. HEAT MASS TRANSFER VOL. 7, 647-78 (APR 1964) 13 FIG 1 TAB 18 REF
A3 B1 C6 D3 E1 F7 G1 64
*HELIUM, *GASEOUS, *THERMAL CONDUCTIVITY, PRESSURE EFFECT, A3 B1 C6 D3 E1
*ARGON, *CARBON DIOXIDE, *GASEOUS, *DIELECTRIC CONSTANT

22446 THE VISCOSITY OF HYDROGEN.
HARRISON,D.J.
GT. BRIT. ROCKET PROPULSION ESTABL., WESTCOTT, TECH. MEMO. NO. 313 (FEB 1964) 9 PP 5 TAB 3 REF
ODC AD 434 141 A3 B1 C6 D1 E2 F5 G5 64
*HYDROGEN, *GASEOUS, *LIQUID, *VISCOSITY, TEMPERATURE EFFECT, PRESSURE EFFECT

22450—See Appendix

22481 EXPERIMENTS AND INVESTIGATION ON HEAT TRANSFER BY LIQUIDS AT OR NEAR THEIR CRITICAL POINTS.
SCHMIDT,E.
TECHNISCHE HOCHSCHULE, MUNCHEN, W. GERMANY, FINAL REPT. (JUL 1963) CONTR. NO. N62558-1906, 125 PP 41 FIG 6 TAB 17 REF
ODC AD 426 252 A3 B1 C6 D1 E1 F5 G5 63
*CARBON DIOXIDE, *LIQUID, *GASEOUS, SATURATED LIQUID, SATURATED VAPOR, *DENSITY, *REFRACTIVE INDEX, *CRITICAL REGION, *CRITICAL CONSTANTS, *PVT DATA, A6 B1 C6 D1 E1
*HEAT TRANSFER, MULTI-PHASE, PHASE TRANSITION, BOILING, CARBON DIOXIDE, CRITICAL POINT

22496 VISCOSITY OF LIQUID HYDROGEN AND DEUTERIUM.
RUDENKO,N.S. KONAREVA,V.G.
ZHUR. FIZ. KHIM. VOL. 37, NO. 12, 2761-62 (1963) 2 FIG 1 TAB 9 REF
PF NO. 370 A3 B7 C6 D1 E1 F7 G1 63
*HYDROGEN, *DEUTERIUM, *LIQUID, *VISCOSITY, TEMPERATURE EFFECT

22497 THE VISCOSITY OF NEON-HELIUM AND NEON-ARGON MIXTURES AT 25 DEGREES C AND 30 DEGREES C.
KESTIN,J. NAGASHIMA,A.
BROWN UNIV., PROVIDENCE, R.I., PROJ. SQUID REPT. NO. BRA-8P (OCT 1963) CONTR. NO. NONR 3623(00), 36 PP 7 FIG 3 TAB 12 REF
NASA N64-12031 A3 B1 C6 D1 E1 F3 G5 63
*NEON, *HELIUM, *GASEOUS MIXTURE, *BINARY SYSTEM, *VISCOSITY, PRESSURE EFFECT, DENSITY, A3 B1 C6 D1 E1
*NEON, *ARGON, *GASEOUS MIXTURE, *BINARY SYSTEM, *VISCOSITY, PRESSURE EFFECT, DENSITY, A3 B1 C6 D1 E1
*NEON, *ARGON, *HELIUM, *GASEOUS, *VISCOSITY, PRESSURE EFFECT, DENSITY

22602 THE VAPOR PRESSURE OF 30 INORGANIC LIQUIDS BETWEEN 1 ATMOSPHERE AND THE CRITICAL POINT.
EDWARDS,D.G.
CALIF. UNIV., LAWRENCE RAD. LAB., LIVERMORE, REPT. NO. UCRL-7167 (JUN 1963) CONTR. NO. W-7405-ENG-48, 51 PP
A3 P1 C6 D1 E2 F8 G5 63
*LIQUID, *VAPOR PRESSURE, EQUATION, COMPILATION, *HYDROGEN, *HYDROGEN DEUTERIDE, *DEUTERIUM, *NITROGEN, *OXYGEN, *NEON, *ARGON, *KRYPTON, *XENON, BOILING TO CRITICAL POINT,

22613 THE THERMAL CONDUCTIVITY OF SOLID HF4 IN THE GAMMA PHASE.
BERMAN,R. RUGERS,S.J.
PHYS. LETTERS VOL. 9, NO. 2, 115-17 (APR 1964) 2 FIG 11 REF
PF NO. 379 A3 B1 C5 D3 E1 F7 G1 64
*SOLIDIFIED GAS, *THERMAL CONDUCTIVITY, *HELIUM, HELIUM-4

22665 VAPOUR PRESSURE RATIOS OF 14N14N, 14N15N AND 15N15N.
JOHNS,T.F.
PROC. PHYS. SOC. (LONDON) VOL. 71, 701-03 (1958) 1 FIG 5 REF
A3 B1 C7 D1 E1 F6 G1 58
*NITROGEN, *LIQUID, *VAPOR PRESSURE, *ISOTOPE

22666 CALCULATION OF HEAT CAPACITIES AND COMPRESSIBILITIES OF LIQUIDS FROM A RIGID SPHERE EQUATION OF STATE.
YOSIM,S.J. (ATOMICS INTERNATIONAL, CANOGA PARK, CALIF.)
J. CHEM. PHYS. VOL. 40, NO. 10, 3069-75 (MAY 1964) 4 FIG 5 TAB 7 REF
A3 B1 C1 D1 E3 F6 G1 64
*SPECIFIC HEAT, *LIQUID, GASEOUS, *ARGON, *HYDROGEN, *NITROGEN, *OXYGEN, *METHANE, *EXPANSIVITY, *COMPRESSIBILITY, *DENSITY, *EQUATION OF STATE, A3 B1 C1 D1 E3
*SPECIFIC HEAT, *EXPANSIVITY, *LIQUID, *NEON, *KRYPTON, *XENON, *ETHANE, *DENSITY, *CARBON MONOXIDE

22672 DENSITIES OF AMMONIA AND METHANE IN THE SOLID STATE.
MANZHELII,V.G. TOLKACHEV,A.M.
SUVIET PHYS. SOLID STATE VOL. 5, NO. 12, 2506-10 (JUN 1964) 4 FIG 2 TAB 20 REF (TRANS. FROM FIZ. TVERDOGO TELA, VOL. 5, NO. 12, 3413-19 (1963))
CA 60 7480C A3 B1 C7 D1 E1 F6 G1 63
*METHANE, *SOLIDIFIED GAS, *AMMONIA, *DENSITY, *EXPANSIVITY

22675 VISCOSITY OF ARGON-AMMONIA MIXTURES.
INASAKI,H. KESTIN,J. NAGASHIMA,A. (BROWN UNIV., PROVIDENCE, R.I.)
J. CHEM. PHYS. VOL. 40, NO. 10, 2980-95 (MAY 1964) 9 FIG 2 TAB 6 REF
A3 B1 C6 D1 E1 F6 G1 64
*GASEOUS MIXTURE, *ARGON, *AMMONIA, *VISCOSITY, CONCENTRATION EFFECT

22676 THERMAL EXPANSION OF INERT GAS SOLIDS IN THE HARMONIC APPROXIMATION.
LEECH,J.W. PEACHEY,C.J. REISSLAND,J.A. (UNIV. OF LONDON, QUEEN MARY COLLEGE)
PHYS. LETTERS VOL. 10, NO. 1, 69-70 (MAY 1964) 1 FIG 5 REF
A3 B1 C4 D3 E3 F7 G1 64
*KRYPTON, LATTICE PARAMETER, *PHYSICAL PROPERTY, *SOLIDIFIED GAS, *EXPANSIVITY

22677 HEAT CAPACITIES OF SOLID DEUTERIUM (33.1 PER CENT-87.2 PER CENT PARA) FROM 1.5 DEGREES K TO THE TRIPLE POINTS. HEATS OF FUSION AND HEAT CAPACITY OF LIQUID.
GRENIER,G. WHITE,D.
J. CHEM. PHYS. VOL. 40, NO. 10, 3015-30 (MAY 1964) 8 FIG 7 TAB 49 REF
A3 B1 C5 D1 E1 F6 G1 64
*DEUTERIUM, *SPECIFIC HEAT, *ENTROPY, PARADEUTERIUM, *SOLIDIFIED GAS, *LIQUID, ORTHO-PARADEUTERIUM, SATURATION CURVE, A6 B1 C5 D1 E1
DEUTERIUM, *ORTHO-PARA CONVERSION, PARA-ORTHO CONVERSION, SOLID

22687 VAKUUMERZEUGUNG DURCH KONDENSATION AN TIEFGEKUHLTEN FLACHEN. II. DIE KONDENSATION VON STICKSTOFF UND WASSERSTOFF AN EINER DIFFUSIONEN KALTFLACHE. VACUUM PRODUCTION BY CONDENSATION ON LOW TEMPERATURE SURFACE. II. THE CONDENSATION OF NITROGEN AND HYDROGEN ON A DEFINITE COLD SURFACE.
KLIPPING,G. MASCHER,W.
Z. ANGEW. PHYS. VOL. 16, NO. 6, 471-76 (1964) 10 FIG 9 REF
A6 B3 C5 D3 E1 F7 G1 64
CRYOPUMPING, NITROGEN, HYDROGEN, A3 B3 C5 D3 E1
*NITROGEN, *HYDROGEN, *VAPOR PRESSURE, *SOLIDIFIED GAS

22695 CALCULATION OF THE VAPOR PRESSURE AND HEATS OF VAPORIZATION AND SUBLIMATION OF LIQUIDS AND SOLIDS BELOW ONE ATMOSPHERE PRESSURE. VI. KRYPTON.
ZIEGLER,W.T. YARBROUGH,D.W. MULLINS,J.C.
GEORGIA INST. TECHNOL. ENG. EXPT. STA., ATLANTA, TECH. REPT. NO. 1 (JUL 1964) CONTR. NO. CST-1154, PROJ. NO. A-764, 44 PP 2 FIG 11 TAB 44 REF
A3 B1 C6 D1 E3 F8 G5 64
*KRYPTON, *BOILING POINT, *TRIPLE POINT, *HEAT OF SUBLIMATION, *HEAT OF VAPORIZATION, *DENSITY, *SOLIDIFIED GAS, *LIQUID, *SPECIFIC HEAT, *VAPOR PRESSURE, EQUATION, CALCULATION, *HEAT OF FUSION

22697 UBER EINEN ZUSAMMENHANG SWISCHEN KRITISCHEN KOEFFIZIENTEN UND NULLPUNKTVOLUMEN VON FLUSSIGKEITEN. RELATIONSHIP BETWEEN CRITICAL COEFFICIENTS AND ZERO-POINT VOLUME IN LIQUIDS.
HECHT,G. HOLSTE,C.
Z. PHYSIK. CHEM. (LEIPZIG) VOL. 224, NO. 5/6, 299-304 (1964) 1 TAB 35 REF
MF NO. 664 A3 B3 C1 D1 E3 F7 G1 63
*CRITICAL CONSTANTS, *GASEOUS, *ARGON, *NEON, *KRYPTON, *XENON, *AMMONIA, *CARBON MONOXIDE, *CARBON DIOXIDE, *METHANE, *FLUORINE, *NITROGEN, *OXYGEN, *REFRIGERANT

22714 THE THERMAL CONDUCTIVITY OF NITROGEN AND ARGON.
KEYES,F.G. VINES,R.G. (MIT, CAMBRIDGE)
AICHE-ASME HEAT TRANSFER CONF., CLEVELAND, OHIO (AUG 9-12, 1964) PAPER NO. 64-HT-14, 7 PP 4 FIG 7 TAB 21 REF
A3 B1 C2 D1 E1 F8 G9 64
*THERMAL CONDUCTIVITY, *GASEOUS, *NITROGEN, *ARGON, PRESSURE EFFECT

22805 EMPIRICAL HEAT CAPACITY EQUATIONS FOR IDEAL GASES.
PATTERSON,D.J. VAN WYLEN,G.J.
J. HEAT TRANSFER VOL. 85, NO. 3, 281-82 (AUG 1963) 3 TAB 2 REF
A3 B1 C2 D1 E2 F6 G1 63
*SPECIFIC HEAT, EQUATION, CALCULATION, *GASEOUS, *OXYGEN, *NITROGEN, *CARBON DIOXIDE, *WATER, *INORGANIC FLUID, NITRIC OXIDE

22807 ON THE STRUCTURE OF SOLID HELIUM.
KEESOM,W.H. TACONIS,K.W.
PHYSICA VOL. 5, 161-64 (1938) 3 FIG 2 TAB 3 REF
PF NO. 485 A3 B1 C5 D1 E1 F6 G1 38
*HELIUM, *SOLIDIFIED GAS, CRYSTAL STRUCTURE, *DENSITY, SPECTROSCOPIC DATA

22812 THERMAL CONDUCTIVITY OF MULTICOMPONENT MIXTURES OF INERT GASES.
SAXENA,S.C. GANDHI,J.P. (RAJASTHAN UNIV., JAIPUR, INDIA)
REV. MOD. PHYS. VOL. 35, NO. 4, 1C22-32 (OCT 1963) 9 FIG 29 REF
22928 THRU 22899 } See Appendix
CA 60 6226H MF NO. 478 A3 81 C8 D1 E3 F6 G1 63
•THERMAL CONDUCTIVITY, •HELIUM, •GASEOUS MIXTURE, •ARGON, •XENON, •NEON, •KRYPTON, •BINARY SYSTEM, •TERNARY SYSTEM

22920 ISOTHERMS OF DIATOMIC GASES AND THEIR BINARY MIXTURES. VII. ISOTHERMS OF HYDROGEN BETWEEN 9 DEGREE C AND 100 DEGREES C.
ONNES,H. KAMERLINGH BRAAK,C.
COMMUNS. PHYS. LAB. UNIV. LEIDEN NO. 100B, 13-15 (1907) TRANSLATED FROM VERSLAG. AFDEEL. NATUURK. AKAD. WETENSCHAP. AMSTERDAM, 420-30 (30 NOV 1907)
A3 81 C8 D1 E1 F7 G1 67
•HYDROGEN, •GASEOUS, •PVT DATA, ISOTHERM, •EQUATION OF STATE, SECOND VIRIAL COEFFICIENT, THIRD VIRIAL COEFFICIENT

22923 TRIPLE POINT PRESSURE OF HYDROGEN.
MESSERLY,G.H.
J. AM. CHEM. SOC. VOL. 63, 1486-87 (1941)
MF NO. 572 A3 81 C8 D1 E1 F6 G1 41
•HYDROGEN, •TRIPLE POINT

22928 DENSITY OF GASEOUS NITROGEN.
TARS,A.M.P. (STAATSMIJNEN LIMBURG, GELEEN, NETH.)
IND. CHEMIST VOL. 39, NO. 9, 475 (1963)
CA 60 2345C A3 81 C7 D1 E2 F7 G1 63
•NITROGEN, •GASEOUS, •DENSITY, NOMOGRAM, PRESSURE EFFECT, TEMPERATURE EFFECT

22931 THERMAL CONDUCTIVITY OF SOLID HE4.
MEZHOV-DEGLIN,L.P.
ZHUR. EKSPTL. I TEORET. FIZ. VOL. 46, NO. 5, 1926-27 (MAY 1964)
A3 87 C4 D3 E1 F6 G1 64
•HELIUM, HELIUM-4, •SOLIDIFIED GAS, •THERMAL CONDUCTIVITY, TEMPERATURE EFFECT, ANOMALY

22933 SUR LES CHALEURS SPECIFIQUES DE L'HELIUM SOLIDE ET LIQUIDE ET LA CHALEURS DE FUSION DE L'HELIUM. THE SPECIFIC HEAT OF SOLID AND LIQUID HELIUM AND THE HEAT OF FUSION OF HELIUM.
KEESOM,W.H.
PROC. INTERN. CONGR. REFRIG., 7TH CONGR., THE HAGUE-AMSTERDAM, 1936, 148-5C.
MF NO. 648 A3 82 C6 D3 E1 F7 G2 36
•HELIUM, •SOLIDIFIED GAS, •LIQUID, •SPECIFIC HEAT, •DENSITY, •HEAT OF FUSION, TEMPERATURE EFFECT

22935 LOW-TEMPERATURE MEASUREMENT WITH HYDROGEN THERMOMETER.
AOYAMA,S. KANDA,E.
J. CHEM. SOC. JAPAN VOL. 55, 15-22 (1934)
MF NO. 597 A3 86 C7 D1 E1 F7 G1 34
•OXYGEN, •BOILING POINT, •LIQUID, •NITROGEN

22936 COMPARISON OF PLATINUM-RHODIUM RESISTANCE THERMOMETERS WITH THE HELIUM GAS THERMOMETER FROM 11 DEGREES TO 300 DEGREES K. AN IMPROVED CRYOSTAT. LOW TEMPERATURE STUDIES, NO. 2.
BLUE,R.W. HICKS,J.F.G.
J. AM. CHEM. SOC. VOL. 59, 1962-65 (1937)
MF NO. 573 A3 81 C6 D1 E1 F6 G1 37
•HYDROGEN, •TRIPLE POINT, •BOILING POINT,
A3 81 C6 D1 E1
•OXYGEN, •BOILING POINT

22938 THERMODYNAMIC STUDIES AT LOW TEMPERATURES. 1. MEASUREMENT OF TEMPERATURES BETWEEN 12 AND 300 DEGREES K.
STRELKOV,P.G. BOROVIK-ROMANOV,A.S. CALOVA,N.P.
ZH. FIZ. KHIM. VOL. 28, 345-52 (1954)
MF NO. 668 A3 87 C6 D1 E1 F7 G1 54
•OXYGEN, •TRIPLE POINT, •SOLIDIFIED GAS, •PHASE TRANSITION PROPERTY, SOLID-SOLID TRANSITION

22939 VORLAUFIGE BESTIMMUNG DER SCHMELZWARME UND DICHTE DES HELIUMS ZWISCHEN 15 GRADEN UND 20 GRADEN ABS. PRELIMINARY DETERMINATION OF THE HEAT OF MELTING AND DENSITY OF HELIUM BETWEEN 15 AND 20 DEGREES ABSOLUTE.
SIMON,F. STECKEL,F.
Z. PHYSIK. CHEM. BODENSTEIN FESTBAND, 737-44 (1931)
MF NO. 588 A3 83 C6 D1 E1 F7 G1 31
•HELIUM, •SOLIDIFIED GAS, •LIQUID, •DENSITY, •HEAT OF FUSION

22955 THE MAXIMUM AND MINIMUM DENSITY AND HEAT OF EVAPORATION OF HELIUM.
VAN LAAR,J.J.
PROC. ACAD. SCI. AMSTERDAM VOL. 29, 1317-34 (1926)
VERSLAG. AKAD. WETENSCHAPP. AMSTERDAM VOL. 35, 991-1008 (1926)
MF NO. 586 A3 81 C5 D1 E1 F7 G1 26
•HELIUM, •LIQUID, •VAPOR PRESSURE, EQUATION, •EQUATION OF STATE, •DENSITY, SECOND VIRIAL COEFFICIENT, LAW OF RECTILINEAR DIAMETERS, •HEAT OF VAPORIZATION, CALCULATION

22966 AN EMPIRICAL EQUATION FOR HELIUM-4 VAPOUR PRESSURE SCALE BETWEEN 1.36 AND 2.16 DEGREES K.
SCURLOCK,R.G. WRAY,E.M. (UNIV. OF SOUTHAMPTON, ENGL.)
CRYOGENICS VOL. 4, NO. 2, 104 (APR 1964) 1 FIG 3 REF
A3 81 C5 D3 E3 F7 G1 64
•HELIUM, HELIUM-4, •LIQUID, •VAPOR PRESSURE, EQUATION, TEMPERATURE SCALE

22979 P-V-T RELATIONS FOR METHANE.
DOUSLIN,D.R. HARRISON,R.H. MOORE,R.T. MCCULLOUGH,J.P.
(BARTLESVILLE PETROL. RES. CENTER, BUREAU OF MINES, BARTLESVILLE, OKLA.)
J. CHEM. ENG. DATA VOL. 9, NO. 3, 358-63 (JUL 1964) 4 TAB 24 REF
A3 81 C8 D1 E1 F6 G1 64
•GASEOUS, •METHANE, •PVT DATA, •EQUATION OF STATE, COMPRESSIBILITY FACTOR, VIRIAL COEFFICIENT, SECOND VIRIAL COEFFICIENT, THIRD VIRIAL COEFFICIENT

22999 — See Appendix

23001 EQUATION OF STATE OF GASES AT HIGH TEMPERATURES AND DENSITIES.
ROWLINSON,J.S. (UNIV. OF WISCONSIN, MADISON)
MOL. PHYS. VOL. 7, NO. 4, 349-61 (1963-64)
CA 60 13904H A3 81 C2 D E3 F7 G1 64
•EQUATION OF STATE, •ARGON, •GASEOUS, LENNARD-JONES FUNCTION

23031 THE CHAPMAN-COWLING SECOND APPROXIMATION TO THE VISCOSITY COEFFICIENT OF BINARY GAS MIXTURES.
SAXENA,S.C. JOSHI,R.K. (RAJASTHAN UNIV., JAIPUR)
INDIAN J. PHYS. VOL. 37, NO. 9, 479-85 (1963)
CA 60 11399A A3 81 CC D E3 F7 G1 63
•VISCOSITY, •BINARY SYSTEM, •HELIUM, •ARGON, •GASEOUS MIXTURE,
A3 81 C8 D E3
•HELIUM, •XENON, •GASEOUS MIXTURE, •BINARY SYSTEM, •VISCOSITY

23032 GENERALIZED VISCOSITY DATA OF SATURATED HYDROCARBONS AT DIFFERENT TEMPERATURES AND PRESSURES.
AGAEV,N.A. GOLUBEV,I.F.
KHIM. I TEKHNOL. TOPLIV I MASEL VOL. 8, NO. 6, 28-30 (1963)
CA 60 11399C A3 87 C8 D E3 F7 G1 63
•VISCOSITY, •HYDROCARBON, •GASEOUS, •METHANE, •ETHANE, •PROPANE, •BUTANE, •LIQUID

23062 PHASE SEPARATION IN THE LIQUID MIXTURE OF NEON AND DEUTERIUM.
DRUMER,J.P. HERMANS,L.J.F. KNAAP,H.F.P. BEENAKKER,J.J.M.
PHYSICA VOL. 30, NO. 7, 1409-20 (JUL 1964) 6 FIG 5 TAB 16 REF
REPR. FROM COMMUNS. KAMERLINGH ONNES LAB., UNIV. LEIDEN NO. 3398
A3 81 C6 D1 E1 F6 G1 64
•LIQUID MIXTURE, •NEON, •DEUTERIUM, FREEZING POINT, MELTING POINT, PHASE SEPARATION, CONCENTRATION EFFECT, TEMPERATURE EFFECT, PHASE DIAGRAM, VAPOR PRESSURE OF MIXTURE

23065 EXTREME VACUUM TECHNOLOGY (BELOW 10-13 TORR) AND ASSOCIATED CLEAN SURFACE STUDIES.
BRYANT,P.J. GOSSELIN,C.M. TAYLOR,L.H.
MIDWEST RES. INST., KANSAS CITY, MO., REPT. NO. NASA CR-84 (JUL 1964) CONTR. NO. NASR-63(06), 7C PP 27 FIG 4 TAB 29 REF
A6 81 C5 D3 E2 F3 G5 64
•SORPTION, ADSORPTION, ADSORPTION ISOTHERM, THEORY, HELIUM, NEON, ARGON, HYDROGEN, NITROGEN, OXYGEN,
A3 81 C5 D3 E2
•LIQUID, •HELIUM, •HYDROGEN, •NITROGEN, •DENSITY, CRYSTAL STRUCTURE, LATTICE PARAMETER,
A7 81 C5 D3 E2

25138 -- See Appendix

23160 THE HEAT CONDUCTIVITY OF GASEOUS 3HE AND 4HE BETWEEN 0.4 DEGREE AND 3.0 DEGREES K.
FOKKENS,K. TACONIS,K.W. DE BRUYN OUBOTER,R.
LOW TEMPERATURE PHYSICS LT8, PROC. 8TH INTERN. CONF. ON LOW TEMP. PHYS., LONDON, 1962, 34-36 (1963) BUTTERWORTHS, WASHINGTON, D.C., 4 FIG 6 REF
A3 81 C4 D3 E1 F7 G2 62
•HELIUM, •GASEOUS, HELIUM 3, HELIUM 4, •THERMAL CONDUCTIVITY

23161 FREEZING AND LAMBDA CURVES OF 3HE-4HE MIXTURES.
LE PAIR,C. TACONIS,K.W. DE BRUYN OUBOTER,R. DAS,P.
LOW TEMPERATURE PHYSICS LT8, PROC. 8TH INTERN. CONF. ON LOW TEMP. PHYS., LONDON, 1962, 37-8 (1963) BUTTERWORTHS, WASHINGTON, D.C., 3 FIG 7 REF
A3 81 C4 D3 E1 F7 G2 62
•HELIUM, HELIUM 3-HELIUM 4, •LIQUID, LAMBDA TEMPERATURE, •MELTING CURVE, HELIUM 4

23165 PVT RELATIONS IN 4HE NEAR THE MELTING CURVE AND THE LAMBDA LINE.
MILLS,R.L. GRILLY,E.R.
LOW TEMPERATURE PHYSICS LT8, PROC. 8TH INTERN. CONF. ON LOW TEMP. PHYS., LONDON, 1962, 421-22 (1963) BUTTERWORTHS, WASHINGTON, D.C., 4 FIG 2 TAB 7 REF
A3 81 C5 D1 E1 F7 G2 62
•HELIUM, •LIQUID, •SOLIDIFIED GAS, MELTING POINT, LAMBDA TEMPERATURE, •PHASE DIAGRAM, SOLID-SOLID TRANSITION, •MELTING CURVE, •PHASE TRANSITION PROPERTY, •THERMAL EXPANSION, VOLUME CHANGE, •COMPRESSIBILITY

23169 THE THERMAL CONDUCTIVITY OF SOLID 3HE AND SOLID 4HE.
CROCKS,P.J. FAIRBANK,H.A.
LOW TEMPERATURE PHYSICS LT8, PROC. 8TH INTERN. CONF. ON LOW TEMP. PHYS., LONDON, 1962, 417-18 (1963) BUTTERWORTHS, WASHINGTON, D.C., 3 FIG 0 REF
A3 81 C4 D3 E1 F7 G2 62
•HELIUM, •SOLIDIFIED GAS, HELIUM 3, •THERMAL CONDUCTIVITY, HELIUM 4

23170 DENSITY MEASUREMENTS IN SOLID 4HE.
KIDDER,J.N.
LOW TEMPERATURE PHYSICS LT8, PROC. 8TH INTERN. CONF. ON LOW TEMP. PHYS., LONDON, 1962, 419-20 (1963) BUTTERWORTHS, WASHINGTON, D.C., 1 FIG 1 TAB 5 REF
23171 THRU 23174 } See Appendix
A3 81 C5 D1 E1 F7 G2 62
•HELIUM, •SOLIDIFIED GAS, •DENSITY, •PVT DATA, PRESSURE EFFECT, MELTING POINT, •PHASE TRANSITION PROPERTY

23179 SPECIFIC HEAT OF SOLID HE4.
FRANCK,J.P. (NATL. RES. COUNCIL, OTTAWA, CAN.)
PHYS. LETTERS VOL. 11, NO. 3, 208-10 (AUG 1964) 1 FIG 1 TAB 7 REF
A3 81 C5 D1 E1 F7 G1 64
•HELIUM, HELIUM-4, •SOLIDIFIED GAS, •SPECIFIC HEAT, DENSITY, DEBYE CONSTANT

23183 SURFACE TENSION OF LIQUID HYDROGEN ISOTOPES AND HYDROGEN-DEUTERIUM SOLUTIONS.
GRIGORIEV,V.N. RUDENKO,N.S.
ZHUR. EKSPTL. I TEORET. FIZ. VOL. 47, NO. 1, 92-96 (JUL 1964) 3 FIG 2 TAB 13 REF
A3 87 C6 D1 E1 F7 G1 64
•HYDROGEN, •HYDROGEN DEUTERIDE, •DEUTERIUM, •LIQUID, •SURFACE TENSION, TEMPERATURE EFFECT

23185 THE SOLID STATE OF RARE GASES.
POLLACK,G.L. (NATL. BUR. STANDARDS, WASHINGTON, D.C.)
REV. MOD. PHYS. VOL. 36, NO. 3, 748-91 (JUL 1464) 26 FIG 8 TAB 254 REF
A3 81 C5 D1 E2 F6 G1 64
•ARGON, •SOLIDIFIED GAS, •DENSITY, LATTICE PARAMETER, •KRYPTON, •XENON, •NEON, •EXPANSIVITY, •TRIPLE POINT, •BOILING POINT, •CRITICAL CONSTANT, •MELTING CURVE, INTERMOLECULAR POTENTIAL, LAW OF CORRESPONDING STATES,
A3 81 C5 D1 E2
•ARGON, •NEON, •KRYPTON, •XENON, •SOLIDIFIED GAS, •VAPOR PRESSURE, •THERMAL CONDUCTIVITY, DEBYE CONSTANT, •SPECIFIC HEAT, GRUNEISEN CONSTANT, ZERO POINT, ENERGY, •COMPRESSIBILITY

23186 SIGNIFICANT STRUCTURE THEORY OF SURFACE TENSION.
REE,F.S. REE,T. EYRING,H. (UNIV. OF UTAH, SALT LAKE CITY)
J. CHEM. PHYS. VOL. 41, NO. 2, 524-30 (JUL 1964) 2 FIG 3 TAB 34 REF
A3 81 C5 D1 E3 F6 G1 64
•SURFACE TENSION, •LIQUID, THEORY, CALCULATION, •ARGON, •NEON, •NITROGEN, •OXYGEN, •METHANE, •CARBON MONOXIDE, •HYDROGEN, •HELIUM, •CHLORINE, •FLUORINE

23187 INTERMOLECULAR POTENTIAL FUNCTIONS AND THE SECOND AND THIRD VIRIAL COEFFICIENTS.
SHERWOOD,A.E. PRAUSNITZ,J.M. (UNIV. OF CALIF., BERKELEY)
J. CHEM. PHYS. VOL. 41, NO. 2, 429-37 (JUL 1964) 12 FIG 7 TAB 7 REF

23196 VAPOR PRESSURES OF SOME DEUTERATED ETHANES.
VAN HOOK,W.A. (UNIV. OF TENN., KNOXVILLE)
J. CHEM. PHYS. VOL. 40, NO. 12, 3727-28 (JUN 1964) 2 FIG 6 REF
MF NO. 881 A3 B1 C7 D3 E1 F6 G1 64
•VAPOR PRESSURE, DEUTERO-COMPOUND, •ETHANE, ISOMER, •LIQUID

23212 EIN MOLLIER-I LG P-DIAGRAM FUER TRIFLUORMONOBROM-METHAN (R 13 B 1). MOLLIER-I, LOG P-DIAGRAM FOR TRIFLUOROMONOBROMOMETHANE (R13 B1).
ROPPUSCH,U.K.
KALTETECHNIK VOL. 16, NO. 3, 69-76 (MAR 1964) 7 FIG 13 REF
MF NO. 852 A3 B3 C2 D3 E2 F7 G1 64
PRESSURE-ENTHALPY DIAGRAM, FREON 13, •REFRIGERANT, •VAPOR PRESSURE, •LIQUID

23248 CORRELATION OF THE VISCOSITY OF LIGHT PARAFFIN HYDROCARBONS AND THEIR MIXTURES IN THE LIQUID AND GASEOUS REGIONS.
GIDDINGS,J.G. KOBAYASHI,R. (RICE UNIV., HOUSTON, TEX.)
J. PETROL. TECHNOL. VOL. 16, NO. 6, 679-82 (JUN 1964) 5 FIG 1 TAB 26 REF
A3 B1 C8 D1 E2 F6 G1 64
•GASEOUS MIXTURE, •VISCOSITY, •METHANE, •ETHANE, •PROPANE, •HYDROCARBON, •DENSITY, •BINARY SYSTEM

23260 SINGLE-CRYSTAL STUDIES OF BETA-FLUORINE AND OF GAMMA-OXYGEN.
JORDAN,T.H. STREIB,W.E. SMITH,H.W. LIPSCOMB,W.N.
(HARVARD UNIV., CAMBRIDGE, MASS.)
ACTA CRYST. VOL. 17, NO. 6, 777-78 (JUN 1964) 1 FIG 1 TAB 13 REF
MF NO. 821 A3 B1 C7 D1 E1 F7 G1 64
•SOLIDIFIED GAS, •FLUORINE, •OXYGEN, CRYSTAL STRUCTURE, SOLID-SOLID TRANSITION

23267 THE HEAT CAPACITY OF SOLID DEUTERIUM BETWEEN 0.3 DEGREES K AND 13 DEGREES K.
GONZALEZ,O.D.
OHIO STATE UNIV., COLUMBUS, PH. D. THESIS (1951) 88 PP 14 FIG 8 TAB 39 REF (AVAIL. UNIVERSITY MICROFILMS, ANN ARBOR, MICH., ORDER NO. 24105, $2.75)
MF NO. 893 A3 B1 C4 D1 E1 F9 G7 51
•DEUTERIUM, ORTHODEUTERIUM, •SOLIDIFIED GAS, •SPECIFIC HEAT, DEBYE CONSTANT,
A2 B1 C4 D1 E1
ALUM, •INORGANIC SOLID, IRON, •SPECIFIC HEAT

23270 SPECIFIC HEAT OF LIQUID HELIUM NEAR THE LAMBDA POINT.
KELLERS,G.F.
DUKE UNIV., DURHAM, N. CAR., PH. D. THESIS (1960)
89 PP 12 FIG 60 REF (AVAIL. UNIVERSITY MICROFILMS, ANN ARBOR, MICH., ORDER NO. 60-6033, $2.75)
MF NO. 895 A3 B1 C4 D1 E1 F9 G7 60
•HELIUM, HELIUM-4, •LIQUID, SATURATED LIQUID, •SPECIFIC HEAT, EQUATION, LAMBDA TEMPERATURE

23310 THE VISCOSITY OF NEON BETWEEN 25 DEGREES C AND 75 DEGREES C AT PRESSURES UP 1800 ATMOSPHERES. CORRESPONDING STATES FOR THE VISCOSITY OF THE NOBLE GASES UP TO HIGH DENSITIES.
TRAPPENIERS,N.J. BOTZEN,A. VAN DEN BERG,H.R.
VAN OOSTEN,J.
PHYSICA VOL. 30, NO. 5, 985-96 (MAY 1964) 5 FIG 10 TAB 29 REF
A3 B1 C8 D1 E1 F6 G1 64
•NEON, •GASEOUS, •VISCOSITY, PRESSURE EFFECT, VERY HIGH PRESSURE, DENSITY,
A3 B1 C8 D1 E2
•HELIUM, •NEON, •KRYPTON, •ARGON, •GASEOUS, •VISCOSITY, PRESSURE EFFECT, COMPILATION

23311 THE THERMAL CONDUCTIVITY OF NEON BETWEEN 25 DEGREES C AND 75 DEGREES C AT PRESSURES UPTO 2600 ATMOSPHERES.
SEAGERS,J.V. BOLK,W.T. STIGTER,C.J.
PHYSICA VOL. 30, NO. 5, 1918-26 (MAY 1964) 4 FIG 2 TAB 21 REF
A3 B1 C8 D1 E1 F6 G1 64
•NEON, •GASEOUS, •THERMAL CONDUCTIVITY, PRESSURE EFFECT, VERY HIGH PRESSURE, DENSITY, EQUATION

23385 CONDENSED PHASE DIAGRAM OF THE SYSTEM ARGON-NITROGEN.
LONG,H.M. DIPAOLO,F.S.
CHEM. ENG. PROGR. SYMP. SER. VOL. 59, NO. 44, 30-35 (1963) 6 FIG 1 TAB 8 REF
MF NO. 199-C A3 B1 C7 D1 E1 F6 G1 63
•BINARY SYSTEM, •ARGON, •NITROGEN, •PHASE DIAGRAM, •LIQUID MIXTURE, SOLID SOLUTION, •MELTING CURVE, CONCENTRATION EFFECT, VAPOR PRESSURE OF MIXTURES, SOLID-LIQUID EQUILIBRIUM, •PHASE EQUILIBRIUM

23386 THE SPECIFIC HEAT OF A NATURAL GAS AND METHANE AT 69 AND 103 ATMOSPHERES.
HUJSAK,K.L. FRONING,H.R. GOODIN,C.S.
CHEM. ENG. PROGR. SYMPOSIUM SER. VOL. 59, NO. 44, 88-94 (1963) 8 FIG 1 TAB 7 REF
A3 H1 C8 D1 E1 F6 G1 63
•METHANE, •GASEOUS, •SPECIFIC HEAT, NATURAL GAS

23387 THERMODYNAMICS OF SOLUTIONS, VIII. AN IMPROVED EQUATION OF STATE.
REDLICH,O. DUNLAP,A.K.
CHEM. ENG. PROGR. SYMPOSIUM SER. VOL. 59, NO. 44, 95-100 (1963) 10 FIG 1 TAB 32 REF
MF NO. 283 A3 B1 C7 D1 E3 F6 G1 63
•EQUATION OF STATE, •GASEOUS, •PVT DATA, COMPRESSIBILITY FACTOR, •NITROGEN, •METHANE, •WATER, HYDROGEN SULFIDE, •CARBON DIOXIDE, SULFUR DIOXIDE, •INORGANIC FLUID, •PROPANE

23390 SOLID-VAPOR EQUILIBRIUM OF THE CARBON DIOXIDE-NITROGEN SYSTEM AT PRESSURES TO 200 ATMOSPHERES.
SMITH,G.E.
MICH. UNIV., ANN ARBOR, PH. D. THESIS (1963) 218 PP (ABSTR. IN DISS. ABSTR. VOL. 24, NO. 12, 5308 (JUN 1964) (AVAIL. UNIV. MICROFILMS, ANN ARBOR, MICH., ORDER NO. 64-6712, $2.85)
A3 B1 C8 D1 E1 F9 G7 63
•CARBON DIOXIDE, •NITROGEN, •BINARY SYSTEM, •PHASE EQUILIBRIUM, SOLID-VAPOR EQUILIBRIUM, PRESSURE EFFECT, ISOTHERM, •EQUATION OF STATE

23392 CONCERNING THE EQUATION OF STATE OF HELIUM.
PREOBRAZHENSKII,A.S.
INZH. FIZ. ZHUR. VOL. 6, 64-76 (JUN 1963) 2 FIG 3 TAB 2 REF
(TRANS. BY JOINT PUBLICATIONS RES. SERVICE, WASHINGTON, D.C.)
NASA N64-11971 A3 B1 C8 D1 E3 F3 G1 63
•HELIUM, •GASEOUS, •EQUATION OF STATE

23393 THE REFRACTIVE INDICES OF LIQUID OXYGEN, NITROGEN, AND HYDROGEN.
JOHNS,H.E. WILHELM,J.O. (UNIV. OF TORONTO, CAN.)
CAN. J. RES. VOL. 15A, NO. 7, 101-08 (JUL 1937) 7 FIG 3 TAB 9 REF
A3 B1 C6 D1 E1 F7 G1 37
•OXYGEN, •NITROGEN, •HYDROGEN, •LIQUID, •REFRACTIVE INDEX, TEMPERATURE EFFECT, •DENSITY

23394 SPECIFIC HEAT ANOMALY AND NUCLEAR RESONANCE IN CRYSTALLINE HYDROGEN IN CONNECTION WITH NEW DATA ON ITS STRUCTURE.
DUKHIN,S.S.
SOVIET PHYS. JETP VOL. 10, NO. 5, 1954-55 (MAY 1960) 10 REF (TRANS. FROM ZHUR. EKSPTL. I TEORET. FIZ. VOL. 37, NO. 5, 1486-88, NOV 1959)
A3 B1 C5 D2 E3 F6 G1 59
•HYDROGEN, •DEUTERIUM •SOLIDIFIED GAS, CRYSTAL STRUCTURE, •SPECIFIC HEAT

23397 KINETIC THEORY OF DENSE FLUIDS. XVII. THE SHEAR VISCOSITY.
LOWRY,B.A. RICE,S.A. GRAY,P.
J. CHEM. PHYS. VOL. 40, NO. 12, 3673-83 (1964) 6 FIG 6 TAB 30 REF
A3 B1 C7 D1 E1 F6 G1 64
•ARGON, •LIQUID, •VISCOSITY

23399 AN EXPERIMENTAL DETERMINATION OF HELIUM DENSITY AT 3,200 PSIA AND 38 DEGREES R.
KRAVER,T.C. REICHENBACHER,F.W.
AIRESEARCH MFG. CO., PHOENIX, ARIZ., ENG. REPT., NO. AP-5076-R (AUG 1964) 21 PP 9 FIG 1 TAB
A3 B1 C6 D1 E1 F8 G9 64
•HELIUM, •GASEOUS, •DENSITY, •VERY HIGH PRESSURE, •PVT DATA

23400 ARGON-OXYGEN-NITROGEN THREE COMPONENT SYSTEM EXPERIMENTAL VAPOR-LIQUID EQUILIBRIUM DATA.
WILSON,G.M. SILVERBERG,P.M. ZELLNER,M.G.
AIR PRODUCTS AND CHEMICALS INC., ALLENTOWN, PA., REPT. NO. APL-TDR-64-64 (APR 1964) CONTR. NO. AF 33(657)-8742, 314 PP 188 FIG 26 TAB 47 REF
A3 B1 C7 D1 E1 F8 G5 64
•NITROGEN, •OXYGEN, •ARGON, •LIQUID, •VAPOR PRESSURE, EQUATION,
A3 B1 C7 D1 E1
•OXYGEN, •ARGON, •NITROGEN, •GASEOUS MIXTURE, •LIQUID MIXTURE, •BINARY SYSTEM, •TERNARY SYSTEM, •PHASE EQUILIBRIUM, LIQUID-VAPOR EQUILIBRIUM, •DENSITY, •ENTHALPY, HEAT OF MIXING, ACTIVITY COEFFICIENT, VAPOR PRESSURE OF MIXTURES

23419 A SMALL-ANGLE X-RAY SCATTERING STUDY OF CRITICAL COALESCENCE IN NITROGEN.
THOMAS,J.E. SCHMIDT,P.W.
J. AM. CHEM. SOC. VOL. 86, NO. 17, 3554-56 (SEPT 1964)
3 FIG 1 TAB 11 REF
A3 B1 C7 D1 E1 F6 G1 64
•NITROGEN, •GASEOUS, •OPTICAL PROPERTY, SCATTERING, X-RAY, •COMPRESSIBILITY

23435 THE DIFFERENCE IN VAPOUR PRESSURE BETWEEN NORMAL AND EQUILIBRIUM HYDROGEN. VAPOUR PRESSURE OF NORMAL HYDROGEN BETWEEN 20 DEGREES K AND 32 DEGREES K.
VAN ITTERBEEK,A. VERBEKE,O. THEEWES,F. STAES,K. DEBOELPAEP,J.
PHYSICA VOL. 30, NO. 6, 1238-44 (JUN 1964) 5 FIG 4 TAB 9 REF
A3 B1 C8 D1 E1 F6 G1 64
•HYDROGEN, NORMAL HYDROGEN, •PARAHYDROGEN, •LIQUID, •VAPOR PRESSURE, EQUATION, TEMPERATURE EFFECT, •BOILING POINT

23446 EQUATIONS OF STATE FOR CARBON MONOXIDE AND CARBON DIOXIDE.
PRIVOROTSKII,A.S. (M.V. LOMONOSOV STATE UNIV., MOSCOW)
INZH.-FIZ. ZH., AKAD. NAUK BELORUSSK. SSR VOL. 6, NO. 12, 101-06 (1963)
CA 60 9936E A3 B7 C8 D E3 F7 G1 63
•CARBON MONOXIDE, •CARBON DIOXIDE, •GASEOUS, •EQUATION OF STATE

23448 COEFFICIENT OF VISCOSITY OF ATOMIC HYDROGEN AND THE COEFFICIENT OF MUTUAL DIFFUSION FOR ATOMIC AND MOLECULAR HYDROGEN.
BROWNING,R. FOX,J.W. (UNIV. COLL., LONDON)
PROC. ROY. SOC. (LONDON) VOL. A278, NO. 1373, 274-86 (1964)
CA 60 9938H A3 B1 C8 D E1 F6 G1 64
•HYDROGEN, •GASEOUS, •VISCOSITY, •TRANSPORT PROPERTY, DIFFUSION COEFFICIENT

23478 BEITRAG ZUR DEUTUNG DES CRYOTRAPPING-EFFEKTES. EXPLANATION OF THE CRYOTRAPPING EFFECT.
KRALS,F.H.
MONATSH. CHEM. VOL. 95, NO. 3, 733-38 (1964) 2 FIG 10 REF
A6 B3 C5 D3 E3 F7 G1 64
•CRYOPUMPING, •ARGON,
A3 B3 C5 D3 E3
•ARGON, •SOLIDIFIED GAS, •HYDROGEN, •VAPOR PRESSURE, PARTIAL PRESSURE

23482 TECHNICAL ASPECTS OF ORTHO-PARAHYDROGEN CONVERSION.
SCHMAUCH,G.E. SINGLETON,A.H.
AIR PRODUCTS AND CHEMICALS, INC., ALLENTOWN, PA., MANUSCRIPT 64-36 (1963) 42 PP 8 FIG 3 TAB 61 REF
A6 B1 C6 D1 E1 F8 G9 63
•ORTHO-PARA CONVERSION, CATALYST, •HYDROGEN, •STORAGE,
A3 B1 C6 D1 E1
•HYDROGEN, •PARAHYDROGEN, •ENTHALPY, •GASEOUS

23500
23501
23502 — See Appendix X

23552 PROPERTIES OF NITROGEN.
NAMIKAWA,K. PETRZZI,P.J.
AEROJET-GENERAL CORP., SACRAMENTO, CALIF., REPT. NO. 9230-24-63 (DEC 1963) 25 PP 17 FIG 14 REF
DDC AD 434 793 A3 B1 C7 D1 E2 F5 G5 63
•NITROGEN, •GASEOUS, •DENSITY, •VISCOSITY, •SPECIFIC HEAT, •THERMAL CONDUCTIVITY, •LIQUID, •VAPOR PRESSURE, •HEAT OF VAPORIZATION, •DIELECTRIC CONSTANT, •VELOCITY OF SOUND, •COMPRESSIBILITY, •REFRACTIVE INDEX, SPECIFIC HEAT RATIO,
A3 B1 C7 D1 E2
•NITROGEN, •SOLIDIFIED GAS, •SPECIFIC HEAT, SOLID-SOLID TRANSITION, •DIELECTRIC CONSTANT

23558 MOLECULAR STATISTICAL CALCULATION OF THE THERMODYNAMIC PROPERTIES OF INERT GASES ADSORBED ON GRAPHITE.
KISELEV,A.V. POSHKUS,D.P. AFREIMOVICH,A.F.
ZH. FIZ. KHIM. VOL. 38, NO. 6, 1514-22 (1964)
MF NO. 927 A3 B7 C1 D1 E3 F7 G1 64
•HELIUM, •NEON, •ARGON, •KRYPTON, •XENON, •INTERNAL ENERGY, •ENTHALPY, •SPECIFIC HEAT, •CHEMICAL POTENTIAL, •GASEOUS

23589 SIMULTANEOUS MEASUREMENTS OF SURFACE TENSION AND VISCOSITY OF LIQUID ARGON BY MICROBALANCE.
SAJI,Y. KOBAYASHI,S. (OSAKA CITY UNIVERSITY, OSAKA, JAPAN)
CRYOGENICS VOL. 4, NO. 3, 136-40 (JUN 1964) 8 FIG 1 TAB 14 REF
A3 B1 C7 D1 E1 F7 G1 64
*ARGON, *LIQUID, *DENSITY, *VISCOSITY, *SURFACE TENSION, SATURATED LIQUID

23595 AN EXPANDED PRINCIPLE OF CORRESPONDENCE FOR THE DETERMINATION OF QUANTITIES OF STATE.
ROMEUSCH,U.K.
ALLGEM. WARMETECH. VOL. 11, 41-50, 133-45 (1962-63) (TRANS. BY REDSTONE SCI. INFORM. CENTER, REDSTONE ARSENAL, ALA., TRANS. NO. RSIC-198, JUN 1964) 55 PP 21 FIG 3 TAB 50 REF
UDC AD 442 288 A3 B1 C1 D1 E3 F5 G1 64
*EQUATION OF STATE, *CRITICAL REGION, ISOTHERM, *INTERNAL ENERGY, *ENTHALPY, *ENTROPY, *ARGON, *NITROGEN, *ETHANE, *XENON, *ETHANE, *CARBON DIOXIDE, *ETHYLENE, LAW OF CORRESPONDING STATES

23596 STATISTICAL SURFACE THERMODYNAMICS OF SIMPLE LIQUID MIXTURES.
ECKERT,C.A. PRAUSNITZ,J.M.
A.I.CH.E. JOURNAL VOL. 10, NO. 5, 677-83 (SEPT 1964) 6 FIG 2 TAB 16 REF
A3 B1 C7 D3 E3 F6 G1 64
*LIQUID MIXTURE, *SURFACE TENSION, *BINARY SYSTEM, *ARGON, *NITROGEN, *METHANE, *OXYGEN,
A3 B1 C7 D3 E3
*LIQUID MIXTURE, *SURFACE TENSION, *BINARY SYSTEM, *METHANE, *CARBON MONOXIDE, *NITROGEN

23598 MEASUREMENT OF THE DENSITY OF NITROGEN AND HYDROGEN AT LOW TEMPERATURES AND HIGH PRESSURES BY THE METHOD OF HYDROSTATIC WEIGHING.
GOLUBEV,I.F. DOBROVOL'SKII,G.A.
GAZ. PROM. VOL. 9, NO. 5, 43-47 (1964) 5 FIG 2 TAB 13 REF
MF NO. 830 A3 B7 C6 D1 E1 F7 G1 64
*HYDROGEN, *NITROGEN, *GASEOUS, *DENSITY, TEMPERATURE EFFECT

23617 LENNARD-JONES POTENTIAL PARAMETER VARIATION AS DETERMINED FROM VISCOSITY DATA FOR TWELVE GASES.
MILLIGAN,J.H.,JR. LILEY,P.E.
AICHE-ASME HEAT TRANSFER CONF., CLEVELAND, OHIO (AUG 9-12, 1964) PAPER NO. 64-HT-20, 8 PP 4 FIG 2 TAB 52 REF
A3 B1 C1 D3 E3 F6 G9 64
*ARGON, *AIR, *VISCOSITY, *CARBON MONOXIDE, *METHANE, *NITROGEN, *OXYGEN, NITRIC OXIDE, *ETHANE, *CARBON DIOXIDE, INTERMOLECULAR FORCE, *GASEOUS

23618 THE DETERMINATION OF THE CRITICAL DENSITY OF REAL GASES FROM THE DATA OF THE COEXISTENCE CURVE.
KAZAVCHINSKII,YA.Z. KOBASHYEV,V.I.
INZHENER. FIZ. ZHUR. AKAD. NAUK BELORUS.S.S.R. VOL. 5, NO. 4, 31-34 (1962)
A3 B7 C1 D3 E3 F7 G1 62
*CRITICAL CONSTANT, *GASEOUS, *CARBON DIOXIDE, *METHANE, FREON 12, FREON 13, CRITICAL DENSITY

23627 SPECIFIC HEAT AND SPEED OF SOUND DATA FOR IMPERFECT NITROGEN - II. T EQUALS 100 TO 2200 DEGREES K.
LEWIS,C.H. NEEL,C.A.
ARNOLD ENG. DEVELOP. CENTER, ARNOLD AF STATION, TENN., REPT. NO. AEDC-TDR-64-114 (JUN 1964) CONTR. NO. AF 40(600)-1000, 44 PP 3 TAB 17 REF
NASA N64 22606 MF NO. 219-T A3 B1 C1 D1 E3 F3 G5 64
*NITROGEN, *SPECIFIC HEAT, *GASEOUS, COMPRESSIBILITY FACTOR, *PVT DATA, *VELOCITY OF SOUND

23628 PRANDTL NUMBER MEASUREMENTS AND THERMAL CONDUCTIVITY, VISCOSITY PREDICTIONS FOR AIR, HELIUM AND AIR-HELIUM MIXTURES.
IBELE,W.E. NOVOTNY,J.L. ECKERT,E.R.G.
MINNESOTA UNIV., HEAT TRANSFER LAB., MINNEAPOLIS, FINAL REPT. NASA CR-55273 (DEC 1963) CONTR. NO. NASW-3, 49 PP 10 FIG 7 TAB 53 REF
NASA N64 25659 MF NO. 220-H A3 B1 C6 D1 E1 F3 G5 63
*AIR, *HELIUM *GASEOUS, *GASEOUS MIXTURE, *THERMAL CONDUCTIVITY, *VISCOSITY, *SPECIFIC HEAT, PRANDTL NUMBER, *BINARY SYSTEM

23674 AN EQUATION OF STATE FOR NITROGEN AT HIGH DENSITIES.
BECKER,R.
Z. PHYSIK VOL. 4, 393-409 (1921) TITLE IN TECH. TRANS. VOL. 11, NO. 3, 187 (FEB 1964) (TRANS. AVAIL. SLA, ORDER NO. TT-63-20393 (1963) 15 PP, $1.60)
A3 B1 C6 D1 E F7 G1 21
*NITROGEN, *GASEOUS, *EQUATION OF STATE, HIGH PRESSURE

23787 THERMOCONDUCTIVITY OF NITROGEN AND HYDROGEN AT TEMPERATURE FROM 20 TO-195-DEG. AND PRESSURE FROM 1 TO 500 ATMOSPHERES.
GOLUBEV,I.F. KAL'SINA,M.V.
GAZ. PROM. VOL. 9, NO. 8, 41-43 (1964) 2 FIG 2 REF
MF NO. 217-H A3 B7 C7 D1 E1 F7 G1 64
*GASEOUS, *HYDROGEN, *NITROGEN, *THERMAL CONDUCTIVITY

23790 PROPERTIES OF NORMAL AND PARAHYDROGEN.
STEWART,R.B. RODER,H.M. (NBS, BOULDER, COLO.)
TECHNOLOGY AND USES OF LIQUID HYDROGEN, CHAP. 11, 379-464 (SCOTT,R.B., DENTON,W.H., AND NICHOLLS,C.M., EDS.) PERGAMON PRESS INC., NEW YORK (1964) 17 FIG 8 TAB 33 REF
A3 B1 C6 D1 E2 F7 G2 64
*HYDROGEN, *PARAHYDROGEN, *GASEOUS, *PVT DATA, *LIQUID, *ENTROPY, T-S DIAGRAM, *HEAT OF VAPORIZATION, *HEAT OF SUBLIMATION, *SPECIFIC HEAT, *THERMAL CONDUCTIVITY, *VELOCITY OF SOUND, *VISCOSITY, *SURFACE TENSION,
A3 B1 C6 D1 E2
*HYDROGEN, *PARAHYDROGEN, *TRIPLE POINT, *BOILING POINT, *CRITICAL CONSTANT, *LIQUID, SATURATED LIQUID, *DENSITY, *SOLIDIFIED GAS, *GASEOUS, SATURATED VAPOR, *VAPOR PRESSURE, *MELTING LINE

23791 THERMODYNAMIC PROPERTIES OF THE HELIUM-NITROGEN SYSTEM.
PFENNING,G.B. CANFIELD,F.B. KOBAYASKI,R. (OKLAHOMA UNIV., NORMAN)
CRYOGENIC ENG. CONF., PHILADELPHIA, PA. (AUG 18-21, 1964) PAPER NO. C-1, 10 FIG 2 TAB 20 REF
A3 B1 C6 D3 E3 F8 G9 64
*HELIUM, *NITROGEN, *GASEOUS MIXTURE, *BINARY SYSTEM, *ENTHALPY, *EQUATION OF STATE, *GASEOUS, *EQUATION OF STATE, JOULE-THOMSON COEFFICIENT

23794 PHASE EQUILIBRIA IN THE ARGON-HELIUM AND ARGON-HYDROGEN SYSTEMS FROM 66 DEGREES K TO 108 DEGREES K AND PRESSURES TO 120 ATMOSPHERES.
MULLINS,J.C. ZIEGLER,W.T. (GEORGIA INST. TECH., ATLANTA)
CRYOGENIC ENG. CONF., PHILADELPHIA, PA. (AUG 18-21, 1964) PAPER NO. C-4, 5 FIG 6 TAB 10 REF
A3 B1 C7 D1 E1 F8 G9 64
*ARGON, *HELIUM, *BINARY SYSTEM, *LIQUID MIXTURE, *GASEOUS MIXTURE, *PHASE EQUILIBRIUM, LIQUID-VAPOR EQUILIBRIUM, SOLID-LIQUID EQUILIBRIUM,
A3 B1 C7 D1 E1
*ARGON, *HYDROGEN, *BINARY SYSTEM, *LIQUID MIXTURE, *GASEOUS MIXTURE, *PHASE EQUILIBRIUM, LIQUID-VAPOR EQUILIBRIUM, SOLID-LIQUID EQUILIBRIUM,
A3 B1 C7 D1 E1
*ARGON, *MELTING CURVE

23817 QUANTUM STATISTICAL MECHANICS OF ISOTOPE EFFECTS.
OPPENHEIM,I. FRIEDMAN,A.S.
J. CHEM. PHYS. VOL. 35, NO. 1, 35-43 (JUL 1961) 7 FIG 6 TAB 20 REF
A3 B1 C6 D1 E3 F6 G1 61
*HYDROGEN, *DEUTERIUM, *TRITIUM, *HYDROGEN DEUTERIDE, DEUTERIUM TRITIDE, *HELIUM, HELIUM 3, HELIUM 6, COMPRESSIBILITY FACTOR, *PVT DATA, *EQUATION OF STATE, *GASEOUS

23824 INTERMOLECULAR POTENTIAL FUNCTIONS FOR AR, CO, AND CYCLOHEXANE.
TAYLOR,W.L.
CINCINNATI UNIV., OHIO, PH.D. THESIS (1962) 280 PP (ABSTR. IN DISSERTATION ABSTR. VOL. 24, NO. 10, 4014-15, 1964) (AVAIL. UNIVERSITY MICROFILMS, ANN ARBOR, MICH., ORDER NO. 62-4794)
CA 61 2502G A3 B1 C6 D1 E3 F9 G7 62
*ARGON, *CARBON MONOXIDE, CYCLOHEXANE, *ORGANIC FLUID, *GASEOUS, INTERMOLECULAR FORCE, LENNARD-JONES FUNCTION, *VISCOSITY

23829 DETERMINATION OF THE CRITICAL PRESSURE OF MONATOMIC ELEMENTS.
ZHIVOJINOV,J.M. (POLYTECH. SCHOOL, BELGRADE, YUGOSOLAVIA)
J. PHYS. (PARIS) SUPPL. VOL. 25, 38A-40A (1964)
CA 61 2507E A3 B2 C1 D E3 F7 G1 64
*ARGON, *XENON, *GASEOUS, *LIQUID, *CRITICAL CONSTANT, CRITICAL PRESSURE, *PHASE TRANSITION PROPERTY

23830 — See Appendix

24007 MORSE POTENTIAL PARAMETERS FOR HYDROGEN.
BAMETHI,O.P. SAXENA,S.C.
INDIAN J. PURE APPL. PHYS. VOL. 2, NO. 8, 267-69 (AUG 1964) 3 FIG 1 TAB 15 REF
MF NO. 215-J A3 B1 C1 D1 E3 F7 G1 64
MORSE POTENTIAL, *HYDROGEN, *GASEOUS, *VISCOSITY, SECOND VIRIAL COEFFICIENT, DIFFUSION COEFFICIENT

24028 SURFACE TENSION OF PARA-HYDROGEN.
GRIGURICV,V.N.
ZHUR. EKSPTL. I TECHET. FIZ. VOL. 47, NO. 2, 484-85 (AUG 1964) 2 FIG 3 REF
MF NO. 215-C A3 B7 C6 D3 E1 F7 G1 64
*PARAHYDROGEN, *SURFACE TENSION, *LIQUID

24066 TEMPERATURE DEPENDENCE OF THE DEBYE TEMPERATURES FOR THE THERMODYNAMIC FUNCTIONS OF SOLID ARGON.
TOSI,M.P. KUEBLER,J. (ARGONNE NATIONAL LAB.)
AM. PHYS. SOC. MEETING, NEW YORK (JAN 22-25, 1964) PAPER NO. AE12 (ABSTR. IN BULL. AM. PHYS. SOC. VOL. 9, NO. 1, 14, 1964)
A3 B1 C6 D E3 F8 G9 64
*ARGON, *SOLIDIFIED GAS, *SPECIFIC HEAT, *ENTROPY, DEBYE CONSTANT, CALCULATION

24114 DEVIATIONS FROM VAN DER WAALS BEHAVIOR ON THE CRITICAL ISOBAR.
FISHER,M.E. (ROCKEFELLER INST., NEW YORK)
J. CHEM PHYS. VOL. 41, NO. 6, 1877-78 (SEPT 1964) 1 FIG 9 REF
A3 B1 C1 D3 E3 F6 G1 64
*EQUATION OF STATE, VAN DER WAALS, *COMPRESSIBILITY, *ARGON, CRITICAL PRESSURE, *CRITICAL REGION, *GASEOUS

24116 THERMODYNAMIC PROPERTIES AND MOLLIER CHART FOR HYDROGEN FROM 300 DEGREES K TO 20,000 DEGREES K.
KUBIN,R.F. PRESLEY,L.L. (AMES RESEARCH CENTER)
NATL. AERONAUT. SPACE ADMIN., SPEC. PUBL. NO. SP-3002 (1964) 63 PP 2 FIG 3 TAB 13 REF
A3 B1 C2 D1 E3 F3 G6 64
*HYDROGEN, COMPRESSIBILITY FACTOR, *ENTROPY, *ENTHALPY, *SPECIFIC HEAT, *GASEOUS, SPECIFIC HEAT RATIO, *VELOCITY OF SOUND

24240 SINGLE-CRYSTAL X-RAY DIFFRACTION STUDIES OF ALPHA N2 AND BETA N2.
JORDON,T.H. SMITH,H.W. ET AL.
J. CHEM. PHYS. VOL. 41, NO. 3, 756-59 (AUG 1964) 4 TAB 11 REF
MF NO. 218-V A3 B1 C6 D1 E1 F6 G1 64
*SOLIDIFIED GAS, *NITROGEN, X-RAY DIFFRACTION, *CRYSTAL-LATTICE PROPERTY, *PHASE TRANSITION PROPERTY, SOLID-SOLID TRANSITION

24243 ETUDE PAR DIFFRACTION NEUTRONIQUE DE L'OXYGENE SOLIDE.
INVESTIGATION OF SOLID OXYGEN BY NEUTRON DIFFRACTION.
ALIKHANOV,R.A.
J. PHYS. (PARIS) VOL. 25, NO. 5, 449-50 (1964) 1 FIG 13 REF
MF NO. 218-P A3 B2 C5 D1 E1 F7 G1 64
*OXYGEN, *SOLIDIFIED GAS, NEUTRON, LATTICE CONSTANT, DIFFRACTION, *CRYSTAL-LATTICE PROPERTY, SOLID-SOLID TRANSITION

24263 ZS OF METHANE AND ETHANE AT LOW PRESSURE.
WALLACE,G.B. SILBERBERG,I.H. MCKETTA,J.J.
(TEXAS UNIV., AUSTIN)
PETROL. REFINER VOL. 43, NO. 10, 177-80 (OCT 1964) 4 FIG 4 TAB 22 REF
A3 B1 C6 D1 E1 F6 G1 64
*METHANE, *ETHANE, *GASEOUS, *PVT DATA, COMPRESSIBILITY FACTOR, SECOND VIRIAL COEFFICIENT

24274 RESEARCH STUDY OF THERMODYNAMIC SYSTEMS FOR TEMPERATURE CONTROL OF HEAT SINKS IN SPACE-SIMULATION CHAMBERS.
HOCH,G.M.,JR. VOGELHUBER,W.W. ET AL.
CRYOVAC, INC., COLUMBUS, OHIO, REPT. NO. AEDC-TDR-64-121 (JUN 1964) CONTR. NO. AF40(600)-1039 112 PP 26 FIG 6 TAB
NASA N64 21718 MF NO. 220-C A6 B1 C1 D E2 F3 G5 64
*CRYOPUMPING, SPACE APPLICATION, *COOLING PROCESS,
A3 H1 C1 D E2
*VAPOR PRESSURE, *HYDROGEN, *NEON, *NITROGEN, *OXYGEN, *CARBON MONOXIDE, *METHANE, *WATER, *CARBON DIOXIDE, *SOLIDIFIED GAS,
A6 B1 C1 D E2

24286 COMPARATIVE PROPERTIES OF HELIUM-3 AND HELIUM-4.
KELLY,D.P. HAUBACH,W.J.
MOLAD LAB., MONSANTO RES. CORP., MIAMISBURG, OHIO, REPT. NO. MLM-1161 (JUN 1964) CONTR. NO. AT-33-1-GEN-5, 56 PP 5C FIG 2 TAB
NASA N64 22103 MF NO. 220-C A3 B1 C4 D1 E2 F3 G5 64
•HELIUM, HELIUM-3, HELIUM-4, •LIQUID, •SPECIFIC HEAT, •SOLIDIFIED GAS, •VAPOR PRESSURE, HELIUM 3-HELIUM 4, •PHASE DIAGRAM, •MELTING CURVE, •HEAT OF FUSION, •HEAT OF VAPORIZATION, •VISCOSITY, •DENSITY,
A3 B1 C4 D1 E2
•HELIUM, HELIUM-3, HELIUM-4, •THERMAL EXPANSION, •THERMAL CONDUCTIVITY, •SOLIDIFIED GAS, •GASEOUS, •VELOCITY OF SOUND, •COMPRESSIBILITY, •ENTROPY, •SURFACE TENSION, LAMBDA TEMPERATURE, SELF-DIFFUSION, MOLAR VOLUME

24287 MESSUNG DER VISKOSITATEN VON FLUSSIGEN NEON, ARGON UND STICKSTOFF. MEASUREMENT OF VISCOSITY OF LIQUID NEON, ARGON AND NITROGEN.
FORSTER,S.
MONASTBER. DEUT. AKAD. WISS. BERLIN VOL. 5, NO. 10, 659-60 (1963) 1 FIG 1 TAB 5 REF
MF NO. 221-J A3 B3 C7 D1 E1 F7 G1 63
•LIQUID, •NEON, •ARGON, •NITROGEN, •VISCOSITY

24297 REDUCED THERMAL CONDUCTIVITY CHART FOR METHANE.
OWENS,E.J. THODOS,G.
PROC. CONF. THERMODYN. TRANSPORT PROPERTIES FLUIDS, LONDON, 1957, 163-68 (PUBL. 1958)
A3 B1 C7 D1 E3 F7 G2 58
•METHANE, •LIQUID, •GASEOUS, •THERMAL CONDUCTIVITY, •CRITICAL CONSTANT

24298 AN INVESTIGATION OF THE THERMODYNAMIC PROPERTIES OF IMPERFECT GASES.
VUKALOVICH,M.P. NOVIKOV,I.I.
PROC. CONF. THERMODYN. TRANSPORT PROPERTIES FLUIDS, LONDON, 1957, 91-110 (PUBL. 1958)
A3 B1 C8 D1 E3 F7 G2 58
•SPECIFIC HEAT, SPECIFIC HEAT RATIO, •AIR, •NITROGEN, •OXYGEN, •CARBON MONOXIDE, •GASEOUS, •EQUATION OF STATE, •ENTROPY

24299 THE THERMODYNAMIC PROPERTIES OF NORMAL FLUIDS.
PITZER,K.S. CURL,R.F.
PROC. CONF. THERMODYN. TRANSPORT PROPERTIES FLUIDS, LONDON, 1957, 1-9 (PUBL. 1958)
A3 B1 C8 D1 E3 F7 G2 58
•REDUCED VARIABLE, COMPRESSIBILITY FACTOR, •ENTHALPY, •CARBON DIOXIDE, •BUTANE, PENTANE, SECOND VIRIAL COEFFICIENT

24300 — See Appendix

24302 MEASUREMENT OF ULTRASONIC VELOCITY IN COMPRESSED FLUIDS AND DETERMINATION OF SOME THERMODYNAMIC PROPERTIES.
NOURY,J. LACAM,A. M***HIRI,A. ET AL.
PROC. CONF. THERMODYN. TRANSPORT PROPERTIES FLUIDS, LONDON, 1957, 44-56 (PUBL. 1958) 18 FIG 6 REF
A3 B1 C8 D3 E1 F7 G2 58
•VELOCITY OF SOUND, •GASEOUS, NITROUS OXIDE, •CARBON DIOXIDE, •ARGON, METHANE, •PROPANE, •NITROGEN, ULTRASONIC, SPECIFIC HEAT RATIO, •COMPRESSIBILITY, •EQUATION OF STATE, CRITICAL REGION

24307 CERTAIN FEATURES OF THE VISCOSITY AND HEAT CONDUCTIVITY OF LIQUIDS AND GASEOUS MATERIALS.
NOVIKOV,I.I.
SOVIET J. AT. ENERGY VOL. 2, NO. 5, 468-69 (1957)
MF NO. 500-Y A3 B1 C8 D1 E3 F6 G1 57
•CARBON DIOXIDE, •LIQUID, •GASEOUS, •VISCOSITY, •CRITICAL REGION, •THERMAL CONDUCTIVITY

24308 COMPRESSIBILITY OF SOLIDIFIED GASES TO 20,000 KG/CM2.
STEWART,J.W.
LOW TEMPERATURE PHYSICS AND CHEMISTRY, 522-25 (PROC. 5TH INTERNATL. CONF., J.R. DILLINGER, ED.) UNIVERSITY OF WISCONSIN PRESS (1958)
A3 B1 C1 D1 E1 F6 G2 58
•SOLIDIFIED GAS, •COMPRESSIBILITY, •ETHANE, •METHANE, •PROPANE, •ETHYLENE, PROPYLENE, TETRAFLUOROMETHANE, MOLAR VOLUME, •DENSITY

24311 THE SUTHERLAND MODEL FOR THE VISCOSITY OF GASES.
EL MADI,M. ABU ZEID,F.
J. PHYS. CHEM. VOL. 59, 1107-09 (1955)
MF NO. 500-C A3 B1 C8 D1 E3 F6 G1 55
•VISCOSITY, •GASEOUS, •HYDROGEN, SUTHERLAND CONSTANT, •HELIUM, •NEON, •ARGON, •KRYPTON, •XENON, •NITROGEN, •OXYGEN, •METHANE, •CARBON DIOXIDE, •METHANE, •AMMONIA, •CHLORINE

24312 WARMELEITFAHIGKEIT, ZAHIGKEIT UND DIFFUSION IN DER GASPHASE VI. BERICHUNGEN ZWISCHEN DEN SELSIDIFFUSIONS. WARMELELEIT-FAHIGHEITS-UND TEMPERATURLEITKOEFFIZIENTEN VON GASGEMISCHEN BERECHNUNG DERSELBEN UND VERGLEICH MIT DEN ZAHIGKEITSKOEFFIZIEN-TEN. THERMAL CONDUCTIVITY, VISCOSITY, AND DIFFUSION IN THE GAS PHASE. VI. RELATIONS AMONG THE COEFFICIENTS FOR SELF DIFFUSION, THERMAL CONDUCTIVITY AND THERMAL DIFFUSIVITY OF GAS MIXTURES. CALCULATION OF THESE AND COMPARISON WITH THE VISCOSITY COEFFICIENTS.
ANDRUSSOW,L.
Z. ELEKTROCHEM. VOL. 56, 624-33 (1952)
MF NO. 500-P A3 B3 C2 D2 E F7 G1 52
•GASEOUS MIXTURE, •BINARY SYSTEM, •THERMAL CONDUCTIVITY, •VISCOSITY, DIFFUSION COEFFICIENT, •ARGON, •HELIUM, •HYDROGEN, •NEON, •NITROGEN, •METHANE, •OXYGEN, •CARBON MONOXIDE, NITROUS OXIDE

24313 SOME REMARKS CONCERNING THE VISCOSITY OF LIQUID HYDROGEN AND DEUTERIUM IN CONNECTION WITH THE THEORY OF ENSKOG-ENSKOG.
VAN ITTERBEEK,A. VAN PAEMEL,O.
PHYSICA VOL. 8, 522-24 (1941)
MF NO. 501-G A3 B1 C1 D1 E3 F6 G1 41
•VISCOSITY, •LIQUID, •CARBON MONOXIDE, •NEON, •ARGON, •NITROGEN, •OXYGEN, •HYDROGEN, •METHANE, •ETHANE, •AMMONIA, CHLORINE, •HEAT OF VAPORIZATION

24314 RELATIONSHIP OF THERMODYNAMIC PROPERTIES TO MOLECULAR STRUCTURE. HEAT CAPACITIES AND HEAT CONTENTS OF HYDROCARBON VAPORS.
SOUDERS,M.,JR. MATTHEWS,C.S. HURD,C.O.
IND. ENG. CHEM. VOL. 41, 1037-48 (1949)
MF NO. 501-R A3 B1 C7 D1 E2 F6 G1 49
•SPECIFIC HEAT, •ENTHALPY, •NITROGEN, •GASEOUS, •HYDROGEN, •OXYGEN, •CARBON MONOXIDE, •CARBON DIOXIDE, •AMMONIA, •METHANE, •ETHANE, •PROPANE, •HYDROCARBON, •BUTANE

24315 DIE SPEZIFISCHEN WARMEN DER GASE ALS HILFSWERTE ZUR BERECHNUNG VON GLEICHGEWICHTEN. THE SPECIFIC HEATS OF GASES AS AUXILIARY MEANS FOR CALCULATION OF EQUILIBRIA.
SCHWARZ,CARL
ARCH. EISENHUTTENW. VOL. 9, 389-96 (1935)
MF NO. 500-X A3 B3 C8 D1 E2 F7 G1 35
•SPECIFIC HEAT, •HYDROGEN, •OXYGEN, •CARBON DIOXIDE, •CARBON MONOXIDE, •NITROGEN, NITROUS OXIDE, NITRIC OXIDE, •METHANE, EQUATION, •INORGANIC FLUID

24316 DIE MITTLEREN SPEZIFISCHEN WARMEN DER ZWEIATOMIGEN GASE (N2, CO, O2, H2) DES KOHLENDIOXYDES UND DES WASSER-DAMPFES IM BEREICH ZWISCHEN 0 UND 3000 GRADEN ABS. THE MEAN SPECIFIC HEATS OF DIATOMIC GASES (NITROGEN, CARBON MONOXIDE, OXYGEN, HYDROGEN) OF CARBON DIOXIDE AND OF WATER-VAPOUR BETWEEN 0 AND 3000 DEGREES ABSOLUTE.
SCHMIDT,F. SCHNELL,H.
Z. TECH. PHYSIK VOL. 9, 81-92 (1928)
MF NO. 501-S A3 B3 C5 D1 E1 F7 G1 28
•SPECIFIC HEAT, •NITROGEN, •CARBON MONOXIDE, •OXYGEN, •HYDROGEN, •CARBON DIOXIDE, •GASEOUS, EQUATION

24317 THE THERMODYNAMICS OF IDEAL CRYSTALS.
SAVINYKH,S.K.
PHYS. METALS METALLOG. VOL. 6, NO. 3, 20-33 (1958) (TRANS. OF FIZ. METAL. I METALLOVED. VOL. 6, NO. 3, 400-11, 1958)
MF NO. 501-P A3 B1 C1 1 E3 F6 G1 58
•ARGON, •EQUATION OF STATE, •SOLIDIFED GAS, •SPECIFIC HEAT

24318 CHALEUR SPECIFIQUE DES GAZ. THE SPECIFIC HEAT OF GASES.
LOURIE,M.
CHALEUR IND. VOL. 11, 423-35 (1930)
MF NO. 501-N A3 B2 C8 D1 C1 F7 G1 30
•SPECIFIC HEAT, •GASEOUS, •AIR, •NITROGEN, •OXYGEN, •CARBON DIOXIDE, •VELOCITY OF SOUND, •HYDROGEN

24319 DETERMINATION DE LA VISCOSITE DE L'AZOTE COMPRIME JUSQU A 3000 KG/CM. DETERMINATION OF THE VISCOSITY OF NITROGEN COMPRESSED UP TO 3000 KG/CM.
LAZARRE,F. VODAR,B.
COMPT. REND. VOL. 243, NO. 5, 487-89 (JUL 1956)
MF NO. 501-M A3 B2 C8 D1 E1 F7 G1 56
•VISCOSITY, •NITROGEN, •GASEOUS, PRESSURE EFFECT, HIGH PRESSURE

24320 ON THE VISCOSITY OF LIQUID HELIUM IN THE NEIGHBOURHOOD OF THE LAMBDA-POINT.
KEESOM,W.H. KEESOM,P.H.
PHYSICA VOL. 8, 65-66 (1941) (REPR. AS COMMUNS. KAMERLINGH ONNES LAB. UNIV. LEIDEN NO. 260E, 1941)
MF NO. 501-I A3 B1 C5 D3 E1 F6 G1 41
•HELIUM, •VISCOSITY, •LIQUID, LAMBDA TEMPERATURE

24321 THE EQUATION OF STATE FOR HELIUM IN THE INTERMEDIATE REGION OF TEMPERATURE.
JACYNA,J. CERENYANKIN,S. ET AL.
BULL. INTERN. ACAD. POLON. SCI. CLASSE SCI.MATH. NAT. SER. A, 379-86 (1934)
MF NO. 501-J A3 B1 C7 D1 E2 F7 G1 34
•HELIUM, •EQUATION OF STATE, •GASEOUS

24322 MEASUREMENT OF VISCOSITIES OF GASES AT HIGH PRESSURE. II. VISCOSITIES OF NITROGEN AND MIXTURES OF NITROGEN AND HYDROGEN.
IWASAKI,H.
SCI. REPTS. RESEARCH INSTS. TOHOKU UNIV. SER. A VOL. 6, 296-307 (1954)
MF NO. 501-F A3 B1 C8 D1 E1 F7 G1 54
•VISCOSITY, •GASEOUS MIXTUE, •GASEOUS, •HYDROGEN, •NITROGEN, •DENSITY, PRESSURE EFFECT

24323 SPECIFIC HEAT CHARTS FOR GASES.
HALFERDAHL,A.C.
CHEM. AND MET. ENG. VOL. 37, 686-87 (1930)
MF NO. 501-C A3 B1 C2 D3 E2 F6 G1 30
•SPECIFIC HEAT, •GASEOUS, •HYDROGEN, •NITROGEN, •OXYGEN, •CARBON MONOXIDE, •CHLORINE, •CARBON DIOXIDE, •AMMONIA, •METHANE

24324 THERMAL CONDUCTIVITY OF GASES AT HIGH PRESSURES.
COPINGS,C.W. NATHAN,M.F.
IND. ENG. CHEM. VOL. 39, 964-70 (AUG 1947)
MF NO. 500-I A3 B1 C8 D1 E3 F6 G1 47
•THERMAL CONDUCTIVITY, •GASEOUS, PRESSURE EFFECT, •NITROGEN, •METHANE, •ETHYLENE, •PROPANE, •VISCOSITY

24325 ON THE DISTILLATION OF LIQUID AIR, AND THE COMPOSITION OF THE GASEOUS AND LIQUID PHASES.
BALY,E.C.C.
PROC. PHYS. SOC. (LONDON) VOL. 17, 157-69 (1900)
MF NO. 501-M A6 B1 C7 D1 E1 F6 G1 00
•SEPARATION, •AIR,
A3 B1 C7 D1 E1
•OXYGEN, •NITROGEN, •VAPOR PRESSURE, •LIQUID, SATURATED LIQUID

24326 CONDUCTIBILITE THERMIQUE, VISCOSITE ET DIFFUSION EN PHASE GAZEUSE. MEMOIRE 7. HYDROGENE, DEUTERIUM, HELIUM, NEON ET LEURS MELANGES. THERMAL CONDUCTIVITY, VISCOSITY AND DIFFUSION IN THE GAS PHASE. VII. HYDROGEN, DEUTERIUM, HELIUM NEON, AND THEIR MIXTURES.
ANDRUSSOW,L.
J. CHIM. PHYS. VOL. 45, 599-604 (1952)
MF NO. 500-S A3 B2 C8 D1 E2 F7 G1 52
•SPECIFIC HEAT, •GASEOUS, •HYDROGEN, •HELIUM, •DEUTERIUM, •NEON, •HYDROGEN DEUTERIDE, •TRANSPORT PROPERTY, DIFFUSION, •VISCOSITY

24327 EINE NEUE THERMISCHE ZUSTANDSGLEICHUNG DER GASE UND FLUSSIGKEITEN. A NEW THERMODYNAMIC EQUATION OF STATE FOR GASES AND LIQUIDS.
HIPPAN,J.
OSTERR. AKAD. WISS. MATH.-NATURW. KL., SITZBER. ABT. IIB VOL. 162, 787-97 (1953)
MF NO. 500-J A3 B3 C7 D1 E3 F7 G1 53
•EQUATION OF STATE, •GASEOUS, •LIQUID, •NITROGEN, •WATER, •CARBON DIOXIDE

24328 THERMAL PROPERTIES OF SATURATED OXYGEN AND NITROGEN.
VASSERMAN,A.A.
INZHENER. FIZ. ZHUR. VOL. 6, 86-91 (1964)
MF NO. 500-M A3 B7 C7 D1 E2 F7 G1 64
•OXYGEN, •NITROGEN, •LIQUID, •VAPOR PRESSURE, •GASEOUS, SATURATED LIQUID, SATURATED VAPOR, •DENSITY, EQUATION, TRIPLE POINT-TO-CRITICAL POINT, •HEAT OF VAPORIZATION

24330 — See Appendix

24331 ZAHIGKEIT VCN STOFFEN IM FLUESSIGEN UND GASFORMIGEN SATTIGUNGSZUSTAND. MESSUNG DER ZAHIGKEIT VCN FLUESSIGEM STICKSTCFF. VISCOSITY OF SUBSTANCES IN LIQUID AND SATURATED VAPCR STATE. MEASUREMENT OF VISCOSITY CF LIQUID NITROGEN.
FRITZ,H. MENNENHCFER,J.
Z. GES. KALT-IND. VCL. 49, 41-46 (1942) 8 FIG 5 TAB
MF NO. 500-H A3 B3 C7 D1 E1 F7 G1 42
•NITROGEN, •LIQUID, •VISCOSITY

24332 CHALEUR SPECIFIQUE DES GAZ. SPECIFIC HEAT CF GASES.
LOURIE,H.
CHALEUR IND. VOL. 11, 361-70 (1930) 8 FIG 2 TAH
MF NO. 500-A A3 B2 C7 D1 E1 F7 G1 30
•CARBON DICXIDE, •AIR, •CARBON MONOXIDE, •HYDROGEN, •NITROGEN, •OXYGEN, •SPECIFIC HEAT, •GASEOUS

24336 DENSITY OF H2-D2 LIQUID SOLUTIONS.
GRIGOR'EV,V.A. RUDENKO,N.S.
UKR. FIZ. ZHUR. VCL. 7, NO. 7, 737-39 (JUL 1962) 2 FIG 1 TAB 7 REF (TITLE IN MCNTHLY INDEX RUSS. ACCESS. VCL. 15, NO. 12, 3226, MAR 1963)
MF NO. 220-C A3 B7 C6 D1 E1 F7 G1 62
•HYDROGEN, •DEUTERIUM, •LIQUID MIXTURE, •BINARY SYSTEM, •DENSITY, CONCENTRATION EFFECT

24337 A REDUCED EQUATION OF STATE FCR GASEOUS AND LIQUID SUBSTANCES.
COSTOLNICK,J.J. THCCCS,G.
A.I.CH.E. JCURNAL VOL. 5, NO. 2, 269-72 (MAR 1963) 5 FIG 27 REF
CA 58 13155E MF NO. 202-P A3 B1 C7 D1 E3 F6 G1 63
•ARGON, •GASEOUS, •LIQUID, •EQUATION CF STATE, •PVT DATA, •DENSITY, COMPRESSIBILITY FACTOR, •REDUCED VARIABLE

24339 THE SURFACE TENSION CF LIQUID HELIUM-4 AT THE LCW TEMPERATURES AND NEAR LAMBDA-PCINT.
NARAHARA,YOSHIMASA (UNIV. OF PENNSYLVANIA, PHILADELPHIA)
PENN. UNIV., PHILACELPHIA, PH. D. THESIS (1963) 140 PP
(ABSTR. IN DISSERTATION ABSTR. VCL. 24, 1671, 1963) (AVAIL. UNIV. MICROFILMS, ANN ARBOR, MICH., ORDER NO. 63-7074)
CA 60 9937F MF NO. 221-L A3 B1 C4 D1 E1 F9 G7 63
•HELIUM, HELIUM-4, •LIQUID, •SURFACE TENSION, LAMBDA TEMPERATURE, TEMPERATURE EFFECT, HELIUM 3-HELIUM 4

24346 A CERTAIN EXCESS PROPERTY OF THE LIQUID SYSTEM CXYGEN-ARGON.
SAJI,Y. OKUDA,T. (OSAKA CITY UNIV., JAPAN)
CRYCGENIC ENG. CONF., PHILADELPHIA, PA. (AUG 18-21, 1964) PAPER NC. D-7, 19 FIG 11 TAB 17 REF
A3 B1 C7 D1 E1 F8 G9 64
•OXYGEN, •LIQUID, •DENSITY, •SURFACE TENSION, •VISCCSITY, •ARGON, •LIQUID MIXTURE, •BINARY SYSTEM, EXCESS PRCPERTY

24368 NEW VALUES CF THERMAL CONDUCTIVITY AND SPECIFIC HEAT AT DIFFERENT TEMPERATURES FOR A SERIES OF GASES.
SENFTLEBEN,PEHMANN
Z. ANGEW. PHYS. VCL. 17, NO. 2, 86-87 (1964)
CA 61 3756C A3 B3 C8 D E3 F7 G1 64
•CARBON DIOXIDE, •AIR, •ARGON, •KRYPTCN, •METHANE, •ETHYLENE, •ETHANE, •PROPANE, •BUTANE, •HYDROCARBON, METHYL CHLORIDE, •GASEOUS, •SPECIFIC HEAT, •THERMAL CONDUCTIVITY

24390 THE PROPERTIES AND HANDLING OF FLUORINE.
KLEINBERG,S. TOMPKINS,J.F.,JR. ET AL.
AIR PRODUCTS AND CHEMICALS, INC., ALLENTCWN, PA., REPT. NO. ASD-TDR-62-273 (OCT 1963) CONTR. NO. AF 33(616)-6515, 131 PP 1 FIG 57 TAB 75 REF
DDC AD 432 751 A3 B1 C7 D1 E2 F5 G5 63
•FLUORINE, •LIQUID, •VAPOR PRESSURE, •DENSITY, •DIELECTRIC CONSTANT, •TRIPLE PCINT, •CRITICAL CONSTANT, •SURFACE TENSION, COMPATIBILITY, •SOLIDIFIED GAS, •SPECIFIC HEAT, •ENTROPY, •FREE ENERGY, •VISCOSITY
A3 B1 C7 D1 E2
•LICUID MIXTURE, •FLUCRINE, •CXYGEN, •BCILING PCINT,
A3 B1 C7 D1 E2
•FLUORINE, •GASEOUS, CORROSION, •VISCOSITY, •FREE ENERGY, •ENTROPY, •ENTHALPY, •SPECIFIC HEAT, •DENSITY, •THERMAL CONDUCTIVITY, DIFFUSICN COEFFICIENT, •REFRACTIVE INDEX, MAGNETIC SUSCEPTIBILITY, COMPATIBILITY,
A6 B1 C7 D1 E2
•FLUORINE, •HANDLING, •SAFETY, LICUID

24414 DEW AND BUBBLE ISOTHERM CALCULATICNAL METHOD FOR BINARY SYSTEM PHASE AND VOLUMETRIC BEHAVIOR.
RODEWALD,N.C. DAVIS,J.A. KURATA,F. (UNIV. OF KANSAS, LAWRENCE)
IND. ENG. CHEM. FUNDAMENTALS VOL. 3, NO. 1, 8-14 (1964)
CA 60 4856G A3 B1 C7 D1 E1 F6 G1 64
•HELIUM, •NITROGEN, •BINARY SYSTEM, •SOLUTION, SOLUBILITY, •PHASE EQUILIBRIUM, •LIQUID MIXTURE, SATURATED LICUID, NITROGEN, COMPRESSIBILITY FACTOR, SATURATED VAPCR, ISOTHERM, •GASEOUS MIXTURE

24467 RESEARCH ON EXPERIMENTAL HEAT OF VAPORIZATION AND ENTHALPY MEASUREMENTS OF OXYGEN-NITROGEN-ARGON MIXTURES.
LIEB,W.H. WILSON,G.P.
AIR PRODUCTS AND CHEM., INC., ALLENTCWN, PA., QUART. PRCGR. REPT. NO. 2 (OCT 1964) CONTR. NO. AF 33(615)-1332, 38 P 8 FIG 21 TAB 6 REF
A3 B1 C7 D1 E1 F8 G5 64
•NITROGEN, •GASEOUS, •ENTHALPY, •AIR, •OXYGEN, IMPURITY EFFECT, ARGCN,
A3 B1 C7 D1 E1
•AIR, •HEAT CF VAPORIZATION

24498 L'ECHELLE DE TEMPERATURE DU N.P.L. DANS LE DOMAINE 10-90 DEGREES K. THE TEMPERATURE SCALE OF THE N.P.L. IN THE REGION 10 TC 90 DEGREES K.
BARBER,C.R.
COMITE CONSULTATIF THERM. COMITE INTERN. POIDS MESURES, 6E SESSION, PARIS, 1962, 19-21 (1962)
A7 B2 C6 D1 E2 F7 G2 62
24499 THRU 24511 •THERMOMETRY, SCALE,
A3 B2 C6 D1 E2
•BOILING POINT, •OXYGEN, •HYDROGEN, •LIQUID
— See Appendix

24542 APPROXIMATE FORMULAS FCR VISCOSITY AND THERMAL CONDUCTIVITY OF GAS MIXTURES.
BROKAW,R.S.
NATL. AERONAUT. SPACE ADMIN. TECH. NOTE NC. D-2502 (NCV 1964) 20 PP
NASA N64 33084 A3 B1 C8 D1 E3 F3 G6 64
•VISCOSITY, •GASEOUS MIXUTE, •BINARY SYSTEM, •TERNARY SYSTEM, •HELIUM, •NEON, •ARGCN,
A3 B1 C8 D1 E3
•THERMAL CONDUCTIVITY, •GASECUS MIXTURE, HELIUM, •KRYPTCN, •XENON, •BINARY SYSTEM, •TERNARY SYSTEM

24564 CORRELATIONS AND EQUATIONS USED IN CALCULATING THE THERMODYNAMIC PROPERTIES CF HALOGENATED HYDROCARBONS.
MARTIN,J.J.
THERMODYNAMIC TRANSPORT PROPERTIES GASES, LIQUIDS, SOLIDS, PAPERS SYMPOSIUM, LAFAYETTE, INDIANA (1959) 12 PP
(ABSTR. IN SULL. INTERN. INST. REFRIG. VCL. 41, NC. 1, 126, 1961)
A3 B1 CC D E F8 G2 59
•THERMODYNAMIC PROPERTY, •ORGANIC FLUID, ORGANIC HALIDE, •REFRIGERANT, CALCULATICN

24583 COMPARISON CF VARIOUS LIQUID THEORIES WITH THE SIGNIFICANT STRUCTURE THEORY.
REE,T.S. REE,T. EYRING,H. (UNIV. UTAH, SALT LAKE CITY)
J. PHYS. CHEM. VOL. 68, NO. 5, 1163-68 (1964)
CA 61 57C A3 B1 C1 D E3 F6 G1 64
•LIQUID, THEORY, SATURATED LIQUID, •RARE GAS, •NITROGEN, •ENTROPY, •SPECIFIC HEAT, •COMPRESSIBILITY, THERMAL EXPANSION, CALCULATICN

24609 LIQUID-HELIUM RESEARCH IN THE ROYAL SOCIETY MCND LABCRATORY.
ATKINS,K.R. CHASE,C.E. HOLLIS-HALLETT,A.C.
NATL. BUR. STANDARDS CIRC. NO. 519, 131-37 (PROC. NBS SEMICENTENNIAL SYMPOSIUM ON LCW TEMPERATURES PHYSICS) 1952
A3 B1 C5 D3 E1 F2 G6 52
•HELIUM, HELIUM-4, HELIUM II, •LIQUID, •VELOCITY CF SOUND, LAMBDA TEMPERATURE, SUPERFLUID

24610 PROPAGATION CF SECCND SCUND BELOW 1 DEGREE K.
OSBCRNE,D.V.
NATL. BUR. STANDARDS CIRC. NO. 519, 139-44 (PROC. NBS SEMICENTENNIAL SYMPOSIUM ON LOW TEMPERATURE PHYSICS) 1952
A3 B1 C4 D3 E1 F2 G6 52
•HELIUM, •VELOCITY CF SOUND, •LIQUID, SECOND SOUND, HELIUM II

24611 PRESSURE DEPENDENCE OF SECOND-SOUND VELOCITY IN LIQUID HELIUM II.
MAURER,R.L. HERLIN,M.A.
NATL. BUR. STANDARDS CIRC. NO. 519, 145-50 (PROC. NBS SEMICENTENNIAL SYMPOSIUM ON LOW TEMPERATURE PHYSICS) 1952
A3 B1 C4 D3 E1 F2 G6 52
•HELIUM, HELIUM I, •LIQUID, •VELOCITY OF SOUND, SECOND SOUND, SUPERFLUID, PRESSURE EFFECT

24650 THE LIQUEFACTION OF HYDROGEN. PART 3B2. LARGE-SCALE HYDROGEN LICUEFACTION FACILITIES.
VANDER ARENC,P.C. CHELTON,D.B. (NBS, BOULDER, COLO.)
TECHNOLOGY AND USES OF LIQUID HYDROGEN, CHAP. 3, 79-105 (SCCTT,R.B., DENTON,W.H. AND NICHOLLS,C.M. EDS.) PERGAMON PRESS INC., NEW YORK (1964) 37 PP 19 FIG 1 TAB 8 REF
A8 B1 C6 D1 E2 F6 G2 64
•LIQUEFIER, •HYDROGEN, TURBOEXPANDER, FILTER, FACILITY,
A6 B1 C6 D1 E2
•LIQUEFACTICN, •HYDROGEN, •CYCLE, •PURIFICATICN, •SORPTION, CHARCOAL, •CRTHO-PARA CONVERSION, •STORAGE, •TRANSPORTATION, •SAFETY, DISTILLATION

24651 THE LIQUEFACTION OF HYDROGEN. PART 3A. BASIC PRINCIPLES.
VANDER ARENC,P.C. CHELTON,D.B. (NBS, BOULDER, COLO.)
TECHNOLOGY AND USES OF LIQUID HYDROGEN, CHAP. 3, 38-55 (SCCTT,R.B., DENTON,W.H. AND NICHOLLS,C.M., EDS.) PERGAMON PRESS INC., NEW YORK (1964) 18 PP 13 FIG 2 TAB 3 REF
A6 B1 C6 D1 E2 F6 G2 64
•HYDROGEN, •LIQUEFACTICN, •CYCLE, HEAT OF CONVERSION, •PARAHYDROGEN, HAMPSCN PROCESS, ORTHO-PARA CONVERSION, •PURIFICATICN,
A3 B1 C6 D1 E2
•HYDROGEN, •SPECIFIC HEAT, HEAT OF CONVERSION, INVERSION CURVE, •GASECUS

24652 A NCTE ON THE THERMAL CONDUCTIVITY OF SCLID NITROGEN AND THE DIRECT CCNDENSATICN OF NITROGEN GAS INTO A SOLID.
KARAMCHETI,KRISHNAMURTY
UNIV. SC. CALIF., ENG. CENTER, LOS ANGELES, USCEC REPT. NO. 56-206 (JAN 1959) CONTR. NO. AF L8(603)-95, AFCSR TN 59-183, 13 PP 2 FIG 4 REF
ASTIA AC 211 323 A3 B1 C7 D1 E3 F5 G5 59
•NITROGEN, •SCLIDIFIED GAS, •THERMAL CONDUCTIVITY, CALCULATICN, EQUATION

24703 BIBLIOGRAPHY OF VAPOR PRESSURE DATA FOR HYDROCARBCNS.
HOLMES,A.S. BRAUN,W.G. FENSKE,M.R.
AMERICAN PETROL. INST., NEW YORK, BIBLIOG. NO. 2(1964) 66 PP 7 TAB 485 REF
A3 B1 C1 D2 E2 F8 G5 64
•VAPOR PRESSURE, •LIQUID, •METHANE, •ETHANE, •PROPANE, •BUTANE, •HYDROCARBON, ETHYLENE, PROPYLENE, BUTYLENE, PENTENE, HEXANE, PENTANE, BIBLIOGRAPHY,

24720 ON THE THERMAL CONDUCTIVITY OF SATURATED HYDRCCARBONS.
NAZIEV,YA.M.
KHIM. I TEKHNOL. TOPLIV I MASEL, NO. 8, 26-29 (AUG 1964) 4 FIG 1 TAB 6 REF
MF NO. 215-M A3 B7 C8 D1 E1 F7 G1 64
•GASEOUS, •HYDROCARBON, •METHANE, •ETHANE, •PROPANE, •THERMAL CONDUCTIVITY, •BUTANE,

24731 PROPERTIES CF PARA-HYDROGEN. REVISION 1.
AEROJET-GENERAL CORPORATION
AEROJET-GENERAL CORP., SACRAMENTO, CALIF., REPT. NO. 9050-6S (APR 1964) 55 PP 23 FIG 15 REF
DDC AD 448 699 A3 B1 C6 D1 E2 F5 G5 64
•PARAHYDROGEN, •LIQUID, •GASECUS, •SPECIFIC HEAT, SPECIFIC HEAT RATIC, T-S DIAGRAM, PRESSURE-ENTHALPY DIAGRAM, MOLLIER DIAGRAM, •VAPOR PRESSURE, •HEAT CF VAPORIZATION, •VISCOSITY, •THERMAL CONDUCTIVITY, •SURFACE TENSICN, •DIELECTRIC CONSTANT,

24744 DETERMINATION OF VIRIAL COEFFICIENTS BY THE BURNETT METHOD.
HOOVER,A.E. CANFIELD,F.B. KOBAYASHI,R. ET AL.
J. CHEM. ENG. DATA VOL 9, NO. 4, 568-73 (OCT 1964) 3 FIG 1 TAB 25 REF
A5 B1 C8 D1 E1 F6 G1 64
BURNETT METHOD, VIRIAL COEFFICIENT,
A3 B1 C8 D1 E1
VIRIAL COEFFICIENT, •EQUATION OF STATE, •HELIUM, •NITROGEN, •GASEOUS,

24745 SOME REMARKS ON MAGNETIC THERMOMETRY BETWEEN 1.4 AND 23 DEGREES K AND ON THE VAPOR PRESSURE-TEMPERATURE RELATION OF LIQUID HYDROGEN.
DURIEUX,M. VAN DIJK,H. TER HARMSEL,H. ET AL.
COMMUNS. KAMERLINGH ONNES LAB. UNIV. LEIDEN, SUPPL. NO. 121E TO NOS. 325-336. (REPRINTED FROM TEMPERATURE, ITS MEASUREMENT AND CONTROL IN SCIENCE AND INDUSTRY, VOL 3, PT. 1, REINHOLD PUB. CORP., N. Y. (1962)) 11 PP 5 FIG 26 REF
A2 B1 C1 D3 E1 F7 G1 62
*THERMOMETRY, MAGNETIC THERMOMETRY, *HYDROGEN, *GAS THERMOMETRY,
A3 B1 C1 D3 E1
*HYDROGEN, *VAPOR PRESSURE, EQUATION, *LIQUID,

24756 GENERAL IMPROVEMENT OF THE EQUATION OF STATE, SPECIAL EQUATION OF STATE FOR HYDROGEN.
SCHAMES,LEON
Z. PHYSIK VOL 22, 630-34 (1921) (TRANS. BY REDSTONE SCI. INFORM. CENTER, REDSTONE ARSENAL, ALA., TRANS. NO. RSIC-73, OCT 1963)
DDC AD 422 04CE PF NO. 230-L A3 B1 C7 D1 E1 F7 G1 21
*HYDROGEN, *EQUATION OF STATE, VIRIAL COEFFICIENT, *GASEOUS,

24775 SIGNIFICANT STRUCTURE THEORY OF TRANSPORT PHENOMENA.
REE,T.S. REE,T. EYRING,H. (UNIV. UTAH, SALT LAKE CITY)
J. PHYS. CHEM. VOL 68, NO. 11, 3262-67 (NOV 1964) 3 FIG 2 TAB 29 REF
A3 B1 C1 D1 E3 F6 G1 64
*VISCOSITY, *ARGON, *LIQUID, *NITROGEN, *METHANE,
A3 B1 C1 D1 E3
*TRANSPORT PROPERTY, DIFFUSION COEFFICIENT, *LIQUID, *ARGON, *METHANE,

24776 SPECIFIC HEAT OF A GAS NEAR THE CRITICAL POINT.
FISHER,M.E.
PHYS. REV. VOL 136, NO. 6A, A1599-A1604 (DEC 1964) 3 FIG 1 TAB 39 REF
A3 B1 C2 D1 E3 F6 G1 64
*ARGON, *SPECIFIC HEAT, *GASEOUS, *CRITICAL REGION,

24777 PROPERTIES OF OXYGEN. REVISION A.
AEROJET-GENERAL CORPORATION
AEROJET-GENERAL CORP., SACRAMENTO, CALIF., REPT. NO. 9200-11-63 (DEC 1963) 27 PP 18 FIG 29 REF
DDC AD 448 146 A3 B1 C7 D1 E2 F5 G5 63
*OXYGEN, *LIQUID, *GASEOUS, *INDEX OF REFRACTION, *COMPRESSIBILITY, T-S DIAGRAM, *THERMAL CONDUCTIVITY, *VISCOSITY, *SPECIFIC HEAT, *VELOCITY OF SOUND, *HEAT OF VAPORIZATION, *DIELECTRIC CONSTANT, *VAPOR PRESSURE, *SURFACE TENSION,

24780 CALCULATION OF THE SURFACE TENSION OF LIQUIDS BY MEANS OF THE EXCESS ISOCHOR-ISOTHERM POTENTIAL. PART I.
POPEL,S.I. PAVLOV,V.V. CSIN,O.A.
ZHUR. FIZ. KHIM. VOL 37, NO. 3, 622-27 (MAR 1963) 2 TAB 9 REF
PF NO. 227-L A3 B2 C1 D1 E3 F7 G1 63
*SURFACE TENSION, *LIQUID, *ARGON, TEMPERATURE EFFECT, EQUATION, *HYDROGEN, *OXYGEN, *HELIUM, *CARBON MONOXIDE, NITROGEN,

24782 PROPERTIES OF SELECTED ROCKET PROPELLANTS. VOLUME I.
GEORGE,HARRY
BOEING CO., SEATTLE, WASH., REPT. NO. D2-11677, REVISION A (SEPT 1963) 256 PP 81 FIG 23 TAB
DDC AD 444 642 A3 B1 C1 D1 E2 F5 G5 63
*FLUORINE, CORROSION, *LIQUID, *DENSITY, *VAPOR PRESSURE, *VISCOSITY, *SURFACE TENSION, *SOLIDIFIED GAS, *ENTHALPY, *ENTROPY, *SPECIFIC HEAT, *HEAT OF VAPORIZATION, *HEAT OF FUSION, SATURATED LIQUID,
A3 B1 C1 D1 E2
*FLUORINE, *GASEOUS, *DENSITY, *VISCOSITY, *ENTROPY, *THERMAL CONDUCTIVITY, *ENTHALPY, SATURATED VAPOR, *SPECIFIC HEAT, *FREE ENERGY, MOLLIER DIAGRAM, *DIELECTRIC CONSTANT,
A3 B1 C1 D1 E2
*HYDROGEN, *GASEOUS, *LIQUID, *DENSITY, *VISCOSITY, *THERMAL CONDUCTIVITY, *SPECIFIC HEAT, *VAPOR PRESSURE, *SURFACE TENSION, *VELOCITY OF SOUND, *HEAT OF VAPORIZATION, *DIELECTRIC CONSTANT, COMPATIBILITY, *ENTHALPY,
A3 B1 C1 D1 E2
*OXYGEN, *LIQUID, *DENSITY, *COMPRESSIBILITY, *VISCOSITY, *THERMAL CONDUCTIVITY, *HEAT OF VAPORIZATION, *SPECIFIC HEAT, *ENTHALPY, *VAPOR PRESSURE, *SURFACE TENSION, *VELOCITY OF SOUND, SPECIFIC HEAT RATIO,
A3 B1 C1 D1 E2
OXYGEN DIFLUORIDE, *LIQUID, *VAPOR PRESSURE, *DENSITY, *VISCOSITY, *GASEOUS, *SPECIFIC HEAT, *ENTROPY, *ENTHALPY, *FREE ENERGY, *HEAT OF VAPORIZATION,
A6 B1 C1 D1 E2
*FLUORINE, *HYDROGEN, *OXYGEN, OXYGEN DIFLUORIDE, *HANDLING, *STORAGE, *TRANSPORTATION, *SAFETY, PRODUCTION, DECONTAMINATION, EXPLOSION, FIRE HAZARD,

24816 OBSERVATION OF THE LAMBDA ANOMALY IN SOLID D2 BY NUCLEAR RESONANCE.
GAINES,J.R. DE CASTRO,E.M. WHITE,D. (OHIO STATE UNIV., COLUMBUS)
PHYS. REV. LETTERS VOL 13, NO. 14, 425-26 (OCT 1964) 2 FIG 11 REF
DDC AD 608 112 PF NO. 228-K A3 B1 C5 D3 E1 F6 G1 64
*DEUTERIUM, *PHASE TRANSITION PROPERTY, *SOLIDIFIED GAS, SOLID-SOLID TRANSITION, NUCLEAR RESONANCE,

24822 LIQUEFACTION, DISCONTINUITE DES ETATS GAZEUX ET LIQUIDE ET ETAT DE LA VAPEUR SATUREE. LIQUEFACTION, DISCONTINUITY OF THE GASEOUS AND LIQUID STATE AND OF THE SATURATED VAPOR STATE.
DUCLAUX,J.
J. CHIM. PHYS. VOL 61, NOS. 7-8, 1184-90 (JUL-AUG 1964) 5 FIG 1 TAB 8 REF
PF NO. 232-C A3 B2 C7 D1 E3 F7 G1 64
*LIQUID, *VAPOR PRESSURE, *NITROGEN, *PHASE TRANSITION PROPERTY, DISTRIBUTION FUNCTION,

24825 JOULE-THOMSON EFFECTS FOR NITROGEN-ETHANE MIXTURES.
STOCKETT,A.L. WENZEL,L.A.
A.I.CH.E. JOURNAL VOL 10, NO. 4, 557-61 (JUL 1964) 10 FIG 3 TAB 14 REF
PF NO. 213-X A3 B1 C8 D1 E1 F6 G1 64
*GASEOUS MIXTURE, *NITROGEN, *ETHANE, JOULE-THOMSON COEFFICIENT, *ENTHALPY,

24840 THE 1962 IHE SCALE OF TEMPERATURES.
ROBERTS,T.R. SHERMAN,R.H. ET AL (LOS ALAMOS SCI. LAB., N. MEX.)
PROGRESS IN LOW TEMPERATURE PHYSICS (GORTER,C.J. ED.) VOL 4, CHAPT. X, 480-514, NORTH-HOLLAND PUBL. CO., AMSTERDAM (1964) 13 FIG 3 TAB 44 REF
A2 B1 C4 D1 E2 F7 G2 64
*THERMOMETRY, SCALE, *HELIUM, HELIUM 3, VAPOR PRESSURE,
A3 B1 C4 D1 E2
*HELIUM, HELIUM 3, HELIUM 4, *VAPOR PRESSURE, *LIQUID,

24849 VAPOUR PRESSURES OF XENON (77 DEGREES - 180 DEGREES K) AND KRYPTON (77 DEGREES - 130 DEGREES K).
GRUITER,A. SHORROCK,J.C.
NATURE VOL 204, NO. 4963, 1084-85 (DEC 1964) 1 FIG 3 TAB 12 REF
A3 B1 C7 D1 E3 F6 G1 64
*VAPOR PRESSURE, *XENON, *KRYPTON, *HEAT OF FUSION, EQUATION, *LIQUID, *SOLIDIFIED GAS,

24861 NEW HIGH-PRESSURE FLOW CALORIMETER FOR ACCURATE MEASUREMENT OF ENTHALPY DATA.
SANGAL,P.N. GEIST,J.M. ET AL. (AIR PRODUCTS AND CHEMICALS, INC., ALLENTOWN, PA.)
CRYOGENIC ENG. CONF., PHILADELPHIA, PA. (AUG 18-21, 1964) PAPER NO. C-8, 8 FIG 4 TAB 12 REF
A3 B1 C7 D1 E1 F8 G9 64
*NITROGEN, *METHANE, *GASEOUS, PRESSURE EFFECT, HIGH PRESSURE, *ENTHALPY,
A7 B1 C7 D1 E1
RESISTANCE THERMOMETER, *THERMOMETRY, FLOW, *CALORIMETRY,

24914 NEW CRYSTALLINE PHASE IN SOLID ARGON AND ITS SOLID SOLUTIONS.
MEYER,L. BARRETT,C.S. HAASEN,P.
J. CHEM. PHYS. VOL 40, NO. 9, 2744-45 (1964) 11 REF
PF NO. 226-D A3 B1 C6 D1 E1 F6 G1 64
*ARGON, *SOLIDIFIED GAS, LATTICE PARAMETER, *ATOMIC-MOLECULAR PROPERTY, SOLID-SOLID TRANSITION,
A NOTE ON THERMOELECTRICITY IN THE INTERMEDIATE STATE.
READ,W.A.

24915 NEW CRYSTALLINE PHASE IN SOLID ARGON AND ITS SOLID SOLUTIONS.
MEYER,L. BARRETT,C.S. HAASEN,P.
J. CHEM. PHYS. VOL 40, NO. 9, 2744-45 (1964) 11 REF
PF NO. 226-D A3 B1 C6 D1 E1 F6 G1 64
*ARGON, *SOLIDIFIED GAS, LATTICE PARAMETER, *ATOMIC-MOLECULAR PROPERTY, SOLID-SOLID TRANSITION,

24925 DIE ZAHIGKEIT VON ORTHO- UND PARA-WASSERSTOFF BEI TIEFEN TEMPERATUREN. VISCOSITY OF ORTHO AND PARA HYDROGEN AT LOW TEMPERATURES.
BECKER,E.W. STEHL,O.
NATURWISSENSCHAFTEN VOL 38, 331 (1951)
PF NO. 501-C A3 B3 C1 D2 E2 F7 G1 51
*HYDROGEN, NORMAL HYDROGEN, *ORTHO-PARAHYDROGEN, *GASEOUS, *VISCOSITY,

24940 ULTRASONIC PROPAGATION NEAR THE CRITICAL POINT IN HELIUM.
CHASE,C.E. WILLIAMSON,F.C. TISZA,L.
PHYS. REV. LETTERS VOL 13, NO. 15, 467-69 (OCT 1964) 2 FIG 11 REF
PF NO. 228-L A3 B1 C5 D3 E1 F6 G1 64
*HELIUM, *VELOCITY OF SOUND, *CRITICAL REGION, *COMPRESSIBILITY, *GASEOUS,

24946 A GENERALIZED VIRIAL EQUATION OF STATE, DERIVED FROM EXPERIMENTAL DATA.
GYORGY,E.A. OBERT,E.F.
A.I.CH.E. JOURNAL VOL 10, NO. 5, 625-31 (SEPT 1964) 8 FIG 4 TAB 25 REF
PF NO. 230-Z A3 B1 C1 D1 E3 F6 G1 64
*EQUATION OF STATE, VIRIAL COEFFICIENT, *METHANE, *NITROGEN, *OXYGEN, *AIR, *KRYPTON, *NEON,

24948 VIRIAL COEFFICIENTS FOR ARGON, METHANE, NITROGEN AND XENON.
GYORGY,E.A. OBERT,E.F.
A.I.CH.E. JOURNAL VOL 10, NO. 5, 621-25 (SEPT 1964) 1 TAB 45 REF
PF NO. 230-Y A3 B1 C1 D1 E3 F6 G1 64
*EQUATION OF STATE, VIRIAL COEFFICIENT, *METHANE, *NITROGEN, *ARGON, *XENON, SECOND VIRIAL COEFFICIENT, THIRD VIRIAL COEFFICIENT, *GASEOUS,

25000 EXPERIMENTAL STUDY OF THE VISCOSITY OF HELIUM AND NITROGEN.
MAKAVETSKAS,R.A. POPOV,V.N. TSEDERBERG,A.V. (MOSCOW ENERGY INST.)
HIGH TEMPERATURE VOL 1, 169-75 (SEPT-OCT 1963) 10 REF (TRANS. FROM TEPLOVIZ. VYSOKIKH TEMPERATUR VOL 1, 191-97, SEPT-OCT 1963) IAA A64 19699 A3 B1 C8 D1 E1 F7 G1 63
*HELIUM, *NITROGEN, *GASEOUS, *VISCOSITY, PRESSURE EFFECT, TEMPERATURE EFFECT,

25010 COOLANTS.
ZBORIL,JOSEF
FOREIGN TECHNOL. DIV., AF SYSTEMS COMMAND, WRIGHT-PATTERSON AFB, OHIO, TRANS. NO. FTD-TT-61-478 (MAY 1963) 16 PP (TRANS. OF PART OF A BOOK MATERIALY JADERNYCH REAKTORU, PRAGUE, 132-41, 1958) NASA N64 11307 A3 B1 C2 D1 E2 F3 G6 58
*REFRIGERANT, REVIEW, *PHYSICAL PROPERTY,

25041 HYDROGEN MASS FLOWMETER DEVELOPMENT.
SIEV,R. YCDEN,S.K.
AEROJET-GENERAL CORP., AZUSA, CALIF., FINAL REPT. NO. 2048 (JUL 1961) CONTR. NO. AF 33(616)-6811, 213 PP 79 FIG 11 TAB 15 REF
DDC AD 450 666 A7 B1 C6 D1 E1 F5 G5 61
METROLOGY, FLOW METER, *HYDROGEN, FLUID FLOW, *MEASUREMENT, LIQUID, GASEOUS,
A3 B1 C6 D1 E1
*HYDROGEN, T-S DIAGRAM, *VISCOSITY, *LIQUID, *GASEOUS,
A2 B1 C6 D1 E1
*THERMAL EXPANSION, *TEFLON, ANALYSIS, *ZINC, *MAGNESIUM, *BRASS, MONEL, INCONEL, *ALUMINUM, *COPPER, *NICKEL, PYREX, STAINLESS 304, *TITANIUM,

25052 LA CONDUCTIVITE THERMIQUE DE L'ETAT SOLIDE AUX BASSES TEMPERATURES. THE THERMAL CONDUCTIVITY OF THE SOLID STATE AT LOW TEMPERATURES.
VA TIENHEEK,A. VAN BESTE,L.
INGEN. CHIM. BELGE VOL 29, NO. 9, 965-10 (SEPT 1964) 9 FIG
PF NO. 229-I A3 B2 C4 D3 E1 F7 G1 64
*HELIUM, *SOLIDIFIED GAS, *THERMAL CONDUCTIVITY,

25055 THE VISCOSITY OF FIVE GASES. A RE-EVALUATION.
KESTIN,J. WANG,H.E.
BROWN UNIV., PROVIDENCE, R.I., TECH. REPT. NO. 6, AFOSR-TN-56-98 (MAR 1956) CONTR. NO. AF 18(600)-891, 26 PP
DDC AD 82 011 MF NO. 244-K A3 B1 C8 D1 E2 F5 G5 56
*VISCOSITY, *GASEOUS, *NITROGEN, *AIR, *ARGON, *HELIUM, *HYDROGEN

25057 ISOTOPE EFFECTS IN PHASE EQUILIBRIA, A NEW TOOL FOR THE STUDY OF INTERMOLECULAR FORCES.
BIGELEISEN,J.
J. CHEM. PHYS. VOL 61, NO. 1-2, 87-91 (1964) 2 TAB 44 REF
MF NO. 229-J A3 B1 C1 D1 E3 F7 G1 64
*LIQUID, *GASEOUS, *NEON, *ARGON, *KRYPTON, *XENON, INTERMOLECULAR FORCE, *ISOTOPE, *VAPOR PRESSURE,

25058 MEASUREMENTS ON THE SURFACE TENSION OF LIQUID DEUTERIUM.
VAN ITTERBEEK,A.
PHYSICA VOL 7, NO. 4, 329-38 (APR 1940) 1 FIG 1 TAB 3 REF
MF NO. 232-K A3 B1 C1 D1 E1 F6 G1 40
*SURFACE TENSION, *DEUTERIUM, *HYDROGEN, *LIQUID,

25060 THERMAL CONDUCTIVITY OF LIQUIDS.
LIN,S.H. EYRING,H. DAVIS,W.J. (UNIV. OF UTAH, SALT LAKE CITY)
J. PHYS. CHEM. VOL 68, NO. 10, 3017-20 (OCT 1964)
4 FIG 1 TAB 19 REF
MF NO. 227-S A3 B1 C1 D1 E3 F6 G1 64
*THERMAL CONDUCTIVITY, *LIQUID, *NITROGEN, *ARGON, *METHANE, PRESSURE EFFECT, TEMPERATURE EFFECT,

25061 INTERMOLECULAR POTENTIALS FOR INERT GAS ATOMS.
SARAN,A. NARUA,A.K.
CAN. J. PHYS. VOL 42, NO. 10, 2026-29 (OCT 1964)
2 FIG 1 TAB 16 REF
MF NO. 229-P A3 B1 C1 D1 E3 F7 G1 64
*NEON, *ARGON, *KRYPTON, *XENON, INTERMOLECULAR FORCE, *GASEOUS, *EQUATION OF STATE,

25062 THE THEORY OF LIQUIDS AND DENSE GASES.
HENDERSON,D. (ARIZONA STATE UNIV., TEMPE)
ANN. REV. PHYS. CHEM. VOL 15, 31-62 (1964) 2 FIG 2 TAB 166 REF
MF NO. 228-R A3 B1 C1 D1 E2 F6 G1 64
*EQUATION OF STATE, *GASEOUS , REDUCED VARIABLE, *CRITICAL CONSTANT, VIRIAL COEFFICIENT, EXCESS PROPERTY, *ENTROPY, *ARGON, *NEON, *KRYPTON, *XENON, *HELIUM,

25063 LA COMPRESSIBILITE DU METHANE JUSQU A 3000 KG/CM2. THE COMPRESSIBILITY OF METHANE UP TO 3,000 KG/CM2.
DEFFET,L. LIALINE,L. FICKS,F.
IND. CHIM. BELGE VOL 29, NO. 9, 879-88 (SEPT 1964)
6 FIG 3 TAB 7 REF
MF NO. 229-H A3 B2 C2 D1 E1 F7 G1 64
*METHANE, *GASEOUS, COMPRESSIBILITY FACTOR, FUGACITY, *EQUATION OF STATE, *PVT DATA,

25065 A SURVEY OF EXPERIMENTAL METHODS FOR DETERMINING ENTHALPIES OF FLUIDS.
MARIEAU,R.E. (HELIUM RES. CENTER, BUR. MINES, AMARILLO, TEX.)
U. S. BUR. MINES INFORM. CIRC. 8245 (1965) 21 PP 81 REF
A3 B1 C1 D2 E2 F4 G6 65
*HELIUM, *ENTHALPY, *GASEOUS, *SPECIFIC HEAT, REVIEW,
A7 B1 C1 D2 E2
*MEASUREMENT, ENTHALPY, GASEOUS, *HELIUM, SPECIFIC HEAT,

25082 THE COMPRESSIBILITY OF SOLID NOBLE GASES AND THE ALKALI METALS AT 0 DEGREES K.
GROSSE,A.V.
J. INORG. NUCL. CHEM. VOL 26, NO. 11, 1801-09 (NOV 1964)
3 FIG 6 TAB 24 REF
MF NO. 235-J A3 B1 C4 D1 E3 F7 G1 64
*COMPRESSIBILITY, *SOLIDIFIED GAS, *HELIUM, *NEON, *ARGON, *KRYPTON, *XENON,
A2 B1 C4 G1 E3
COMPRESSIBILITY, *LITHIUM, *SODIUM, *POTASSIUM, *RUBIDIUM, *CESIUM, *FRANCIUM,

25092 THE HEAT CAPACITY OF AND THE ENTROPY CHANGE IN A MONOLAYER OF OXYGEN CHEMISORBED ON PLATINUM BLACK FROM 15 TO 300 DEGREES K.
FISHER,R.A. CHON,H. ASTON,J.G.
J. PHYS. CHEM. VOL 68, NO. 11, 3240-46 (NOV 1964)
2 FIG 2 TAB 15 REF
MF NO. 234-G A3 B1 C8 D1 E1 F6 G1 64
*OXYGEN, ADSORPTION, *SPECIFIC HEAT, *ENTROPY, PLATINUM, *GASEOUS ,

25096 CELL MODEL FOR QUANTUM FLUIDS. II. THERMODYNAMIC PROPERTIES OF LIQUID N2.
REE,R.D. HENDERSON,D.
J. CHEM. PHYS. VOL 41, NO. 9, 2709-08 (NOV 1964) 5 FIG 4 TAB 8 REF
MF NO. 234-F A3 B1 C8 D1 E3 F6 G1 64
*HYDROGEN, *LIQUID, *INTERNAL ENERGY, *VAPOR PRESSURE, *SPECIFIC HEAT, *REDUCED VARIABLE, *CRITICAL CONSTANT,

25103 THE EQUATION OF STATE OF LIQUID AND SOLID ARGON.
VAN WITZENBURG,W.
TORONTO UNIV., CANADA, PH. D. THESIS (1963) 76 PP (ABSTR. IN DISSERTATION ABSTR. VOL 25, NO. 2, 1268, AUG 1964) (AVAIL. UNIVERSITY MICROFILMS, ANN ARBOR, MICH., ORDER NO. 64-8266)
MF NO. 236-I A3 B1 C1 D1 E1 F4 G7 63
*ARGON, *SOLIDIFIED GAS, *LIQUID, *DENSITY, *COMPRESSIBILITY, *EXPANSIVITY, *EQUATION OF STATE, HIGH PRESSURE, VERY HIGH PRESSURE, *PVT DATA, *MELTING CURVE, *FREE ENERGY, COMPRESSIBILITY FACTOR,

25176 A BICALORIMETER FOR MEASURING THE THERMAL CONDUCTIVITY OF GASES AND LIQUIDS AT HIGH PRESSURES AND VARIOUS TEMPERATURES.
GOLUBEV,I.F.
TEPLOENERGETIKA VOL 10, 78-82 (DEC 1963)
IAA A64-12014 A7 B7 C8 D E1 F7 G1 63
*CALORIMETER, THERMAL CONDUCTIVITY, GASEOUS, LIQUID,
A3 B7 C8 D E1
*AIR, *GASEOUS, *METHANE, *THERMAL CONDUCTIVITY, PRESSURE EFFECT,

25177 RELATION BETWEEN THERMAL CONDUCTIVITY AND VISCOSITY FOR NONPOLAR GASES. II. ROTATIONAL RELAXATION OF POLYATOMIC MOLECULES.
ONEAL,C.,JR. BROKAW,P.S. (NASA LEWIS RES. CENTER, CLEVELAND OHIO)
PHYS. FLUIDS VOL 6, 1679-82 (DEC 1963) 24 REF
IAA A64-12225 A3 B1 C8 D E1 F7 G1 63
*THERMAL CONDUCTIVITY, *VISCOSITY, *GASEOUS, *OXYGEN, *NITROGEN, *CARBON DIOXIDE, *ACETYLENE, *METHANE, *INORGANIC FLUID, CARBON TETRAFLUORIDE, FLUORIDE, SULFUR, *ETHYLENE, *ETHANE,

25200 FLUOROCARBON GASES DATA SHEETS.
MILEK,J.T.
HUGHES AIRCRAFT CO., ELECTRONIC PROPERTIES INFORM. CENTER, CULVER CITY, CALIF., REPT. NO. DS-142 (NOV 1964) CONTR. NO. AF 33(615)-1245, 111 PP
A3 B1 C8 D1 E2 F8 G5 64
FLUOROCARBON, FREON, *BOILING POINT, *CRITICAL CONSTANT, *DENSITY, *ELECTRICAL PROPERTY, DIELECTRIC BREAKDOWN, *GASEOUS, MELTING POINT, *REFRIGERATION,

25237 THERMAL CONDUCTIVITY OF GASES AT ATMOSPHERIC PRESSURE.
LEACH,J.M.
ARKANSAS UNIV. (FAYETTEVILLE) ENG. EXPT. STA. BULL. NO. 18 (AUG 1953) 48 PP 7 TAB 81 REF
A3 B1 C7 D1 E2 F6 G1 53
*THERMAL CONDUCTIVITY, *AIR, *ARGON, *DEUTERIUM, *FLUORINE, *HELIUM, *HYDROGEN, *KRYPTON, *NEON, *CARBON MONOXIDE, *METHANE, *GASEOUS, *OXYGEN, OXIDE OF NITROGEN,
A3 B1 C8 D1 E2
*THERMAL CONDUCTIVITY, *AMMONIA, *CARBON DIOXIDE, CHLORINE, *ETHANE, *ETHYLENE, *PROPANE, *ACETYLENE, *XENON, *GASEOUS, *REFRIGERANT, FREON,
A3 B1 C8 D1 E2
*GASEOUS MIXTURE, *BINARY SYSTEM, SUTHERLAND CONSTANT, *HYDROGEN, *NITROGEN, *ETHYLENE, TEMPERATURE EFFECT,
A3 B1 C7 D1 E2
*GASEOUS MIXTURE, *VISCOSITY, *HELIUM, *NEON, *ARGON,
A3 B1 C7 D1 E2
*GASEOUS MIXTURE, *TERNARY SYSTEM, *HYDROGEN, *NITROGEN, FREON, *CARBON DIOXIDE, *NEON,

25261 HEAT TRANSPORT IN LIQUID HE3.
LEE,D.M. FAIRBANK,W.M.
PROC. INTERN. CONF. LOW TEMP. PHYS., 5TH, MADISON, WISC., 90-93 (1957) 3 FIG 1 TAB 9 REF
MF NO. 237-G A3 B1 C5 D1 E1 F6 G2 57
*THERMAL CONDUCTIVITY, *LIQUID, *HELIUM, HELIUM 3, HELIUM 4,

25262 CALCULO DE LA TENSION SUPERFICIAL DEL ARGON LIQUIDO, POR EL METODO DE LA FUNCION RADIAL DE DISTRIBUCION. CALCULATION OF THE SURFACE TENSION OF LIQUID ARGON BY A METHOD OF RADIAL DISTRIBUTION FUNCTION.
CERCEAU,D.
ACTA CIENT. VENEZOLANA VOL 14, NO. 2, 45-47 (1963) 2 FIG 14 REF
MF NO. 243 A3 B8 C7 D1 E3 F7 G1 63
*ARGON, *LIQUID, *SURFACE TENSION, CALCULATION,

25268 AN EQUATION OF STATE FOR GAS MIXTURES.
CHEN,N.H.
POLYTECHNIC INST. BROOKLYN, N. Y., PH. D. THESIS (JUN 1964) 144 PP (AVAIL. UNIVERSITY MICROFILMS, ANN ARBOR, MICH., ORDER NO. 64-10683)
MF NO. 229-I A3 B1 C8 D1 E3 F9 G7 64
*EQUATION OF STATE, *GASEOUS MIXTURE, *BINARY SYSTEM, COMPRESSIBILITY FACTOR, *HYDROGEN, *NITROGEN,
A3 B1 C8 D1 E3
*EQUATION OF STATE, *GASEOUS MIXTURE, *BINARY SYSTEM, COMPRESSIBILITY FACTOR, *HYDROGEN, *HELIUM,
A3 B1 C8 D1 E3
*EQUATION OF STATE, *GASEOUS MIXTURE, *BINARY SYSTEM, COMPRESSIBILITY FACTOR, *NITROGEN, *CARBON DIOXIDE,
A3 B1 C8 D1 E3
*EQUATION OF STATE, *GASEOUS MIXTURE, *BINARY SYSTEM, COMPRESSIBILITY FACTOR, *OXYGEN, *ARGON, *ETHYLENE,
A3 B1 C8 D1 E3
*EQUATION OF STATE, *GASEOUS MIXTURE, *BINARY SYSTEM, COMPRESSIBILITY FACTOR, *ARGON, *HELIUM,
A3 B1 C8 D1 E3
*EQUATION OF STATE, *GASEOUS MIXTURE, *BINARY SYSTEM, COMPRESSIBILITY FACTOR, *ARGON, *NITROGEN,
A3 B1 C8 D1 E3
*EQUATION OF STATE, *GASEOUS MIXTURE, *BINARY SYSTEM, COMPRESSIBILITY FACTOR, *METHANE, *NITROGEN,
A3 B1 C8 D1 E3
*EQUATION OF STATE, *GASEOUS MIXTURE, *BINARY SYSTEM, COMPRESSIBILITY FACTOR, *METHANE, *ETHANE,
A3 B1 C7 D1 E3
*NITROGEN, *GASEOUS, *EQUATION OF STATE, COMPRESSIBILITY FACTOR,

25293 THERMAL CONDUCTIVITY AND VISCOSITY OF GAS MIXTURES.
CHEUNG,H. BROMLEY,L.A. WILKE,C.R.
CALIFORNIA UNIV., LAWRENCE RAD. LAB., BERKELEY, REPT. NO. UCRL-8230 REV. (APR 1959) CONTR. NO. W-7405-ENG-48, 64 PP 10 FIG 10 TAB 55 REF
A3 B1 C8 D1 E2 F3 G5 59
*VISCOSITY, *GASEOUS MIXTURE, *BINARY SYSTEM, *NEON, *HELIUM, *HYDROGEN, *ARGON,
A3 B1 C8 D1 E2
*CARBON DIOXIDE, *TERNARY SYSTEM, *MULTICOMPONENT SYSTEM, *VISCOSITY, *GASEOUS MIXTURE, *NITROGEN, *HYDROGEN, *NEON, FREON
A3 B1 C8 D1 E2
*VISCOSITY, *GASEOUS MIXTURE, *BINARY SYSTEM, *HYDROGEN, *CARBON MONOXIDE,
A3 B1 C8 D1 E2
*VISCOSITY, *BINARY SYSTEM, *NITROGEN, *OXYGEN, *HYDROGEN, *GASEOUS MIXTURE,
A3 B1 C8 D1 E2
*VISCOSITY, *TERNARY SYSTEM, *GASEOUS MIXTURE, *NEON, *HELIUM, *ARGON,
A3 B1 C8 D1 E2
*THERMAL CONDUCTIVITY, *TERNARY SYSTEM, *HELIUM, *METHANE, *OXYGEN, *GASEOUS MIXTURE,
A3 B1 C8 D1 E2
*THERMAL CONDUCTIVITY, *TERNARY SYSTEM, *ARGON, *METHANE, *OXYGEN, *GASEOUS MIXTURE,
A3 B1 C8 D1 E2
*THERMAL CONDUCTIVITY, *BINARY SYSTEM, *GASEOUS MIXTURE, *NEON, *NITROGEN, *HYDROGEN, *HELIUM, *CARBON DIOXIDE,
A3 B1 C8 D1 E2
*THERMAL CONDUCTIVITY, *BINARY SYSTEM, *GASEOUS MIXTURE, *AIR, *HYDROGEN, *CARBON MONOXIDE, *AMMONIA,

25302 RESEARCH ON RHEOLOGIC AND THERMODYNAMIC PROPERTIES OF SOLID AND SLUSH HYDROGEN.
ONYER,R.F. COOK,G.A.
LINDE CO., TONAWANDA, N. Y., TWELVE-MONTHS REPT. (OCT 1964) CONTR. NO. AF 33(657)-11398, 140 PP 25 FIG 28 TAB 36 REF
A3 B1 C6 D1 E1 F8 G5 64
*PARAHYDROGEN, *HEAT OF FUSION, *DENSITY, *LIQUID, *SOLIDIFIED GAS, *SPECIFIC HEAT, *ENTHALPY, *THERMAL CONDUCTIVITY, *VISCOSITY, *BOILING POINT, *TRIPLE POINT, *VAPOR PRESSURE, SLUSH, *MELTING C

25312 RESEARCH ON EXPERIMENTAL HEAT OF VAPORIZATION AND ENTHALPY MEASUREMENTS OF OXYGEN-NITROGEN-ARGON MIXTURES.
LIEN,W.H. WILSON,G.M.
AIR PRODUCTS AND CHEMICALS, INC., ALLENTOWN, PA., QUART. PROGR. REPT. NO. 1 (JUL 1964) CONTR. NO. AF 33(615)-1332, 36 PP 13 FIG 9 TAB 14 REF
DDC AD 444 285 MF NO. 244-F A3 B1 C7 D1 E1 F5 G5 64
*GASEOUS MIXTURE, *LIQUID MIXTURE, *PHASE EQUILIBRIUM, *OXYGEN, *NITROGEN, *ARGON, *ENTHALPY, SOLID SOLUTION, SOLID-LIQUID EQUILIBRIUM, *HEAT OF VAPORIZATION, *ARGON, *NITROGEN, *AIR, *TERNARY SYSTEM,

25316 RESEARCH ON RHEOLOGIC AND THERMODYNAMIC PROPERTIES OF SOLID AND SLUSH HYDROGEN.
DWYER,R.F.
LINDE CO., TONAWANDA, N. Y., QUART. REPT. NO. 5 (NOV 1964) CONTR. NO. AF33(657)-11098, 65 PP 10 FIG 6 TAB 9 REF
DDC AD 451 544 A3 B1 C6 D1 E1 F8 G5 64
*PARAHYDROGEN, SLUSH, *DENSITY, *SOLIDIFIED GAS, POLAR VOLUME, *LIQUID,
A7 B1 C6 D1 E1
*DENSITY, *HYDROGEN, SLUSH, *LIQUID, *SOLID, *MEASUREMENT, *THERMAL CONDUCTIVITY

25326 THE THERMAL EXPANSION OF AN ALMOST LINEAR CHAIN.
LLOYD,P. DOWYER,J.J. (UNIV. NEW SOUTH WALES, KENSINGTON) AUSTRALIAN J. PHYS. VOL 16, NO. 2, 193-202 (1963)
CA 60 12672C A3 B1 C7 D1 E3 F7 G1 63
*ARGON, *SOLIDIFIED GAS, *EXPANSIVITY, THERMAL EXPANSION, CALCULATION,

25330 STATE EQUATIONS OF XENON AND METHANE)
PRECVODITELEV,A.S. (STATE UNIV., MOSCOW)
INZHNER. FIZ. ZHUR. AKAD NAUK BELORUS S.S.R. VOL 7, NO. 1, 93-97 (1964)
CA 60 12681A A3 B7 C6 D E3 F7 G1 64
*METHANE, *XENON, *GASEOUS, *EQUATION OF STATE,

25355 THE HYDROGEN ISOTOPES - THERMODYNAMIC PROPERTIES OF THEIR COMPOUNDS.
FOX,T.G.
COLUMBIA UNIV., NEW YORK, REPT. NO. NCDC-1496 (SEPT 1962) 47 PP
A3 B1 C1 D1 E2 F3 G5 62
*HYDROGEN, *DEUTERIUM, *DEUTERO-COMPOUND, *VELOCITY OF SOUND, *EQUATION OF STATE, ZERO POINT ENERGY, *TRIPLE POINT, *GASEOUS, *FREE ENERGY, *SPECIFIC HEAT, BIBLIOGRAPHY, *VAPOR PRESSURE, ANNOTATED BIBLIOGRAPHY, *COMPRESSIBILITY,
A3 B1 C1 D1 E2
*HYDROGEN, *DEUTERIUM, *DEUTERO-COMPOUND, *EXPANSIVITY, *DENSITY, *ATOMIC-MOLECULAR PROPERTY, *THERMAL CONDUCTIVITY, *ENTROPY, BIBLIOGRAPHY, ANNOTATED BIBLIOGRAPHY, *GASEOUS,
A3 B1 C1 D1 E2
*METHANE, *DEUTERO-COMPOUND, *SPECIFIC HEAT, *TRIPLE POINT, SOLID-SOLID TRANSITION, *MELTING CURVE, *HEAT OF FUSION, *HEAT OF VAPORIZATION, BIBLIOGRAPHY, ANNOTATED BIBLIOGRAPHY,
A3 B1 C1 D1 E2
*WATER, *DEUTERO-COMPOUND, ZERO POINT ENERGY, *ENTROPY, *DENSITY, *SPECIFIC HEAT, *VAPOR PRESSURE, SOLID-SOLID TRANSITION, *VELOCITY OF SOUND, *COMPRESSIBILITY, ANNOTATED BIBLIOGRAPHY, BIBLIOGRAPHY,

25362 CALCULATION OF THERMAL CONDUCTIVITY OF COMPRESSED GASES.
NAZIEV,YA.M.
INZHENER. FIZ. ZHUR. AKAD. NAUK BELORUS. S.S.R. VOL 7, NO. 2, 45-47 (1964)
CA 60 15160C A3 B7 C6 D E3 F7 G1 64
*CARBON DIOXIDE, *HYDROCARBON, *GASEOUS, *THERMAL CONDUCTIVITY, CALCULATION,

25365 EQUATION OF STATE OF THE SATURATED VAPOR OF MONOATOMIC ELEMENTS.
ZHIVOJINOV,J.M. (INST. PHYS. ENG. SCHOOL, BELGRADE, YUGOSLAVIA)
GLASNIK MEM. DRUSTVA, BEOGRAD VOL 28, NO. 2, 65-72 (1963)
CA 60 15160C A3 B9 C7 D E3 F7 G1 63
*GASEOUS, SATURATED VAPOR, *EQUATION OF STATE, CRITICAL PRESSURE, *ARGON, *XENON,

25534 CALCULATION OF THE VAPOR PRESSURE AND HEATS OF VAPORIZATION AND SUBLIMATION OF LIQUIDS AND SOLIDS BELOW ONE ATMOSPHERE PRESSURE. VII. ETHANE.
ZIEGLER,W.T. KIRK,B.S. MULLINS,J.C. BERQUIST,A.R.
GEORGIA INST. TECHNOL., ENG. EXPT. STA., ATLANTA, TECH. REPT. NO. 2 (DEC 1964) CONTR. NO. CST-1154, PROJ. NO. A-764, 57 PP 2 FIG 12 TAB 52 REF
A3 B1 C6 D E F8 G5 64
*ETHANE, *LIQUID, *SOLIDIFIED GAS, *VAPOR PRESSURE, *GASEOUS, *HEAT OF VAPORIZATION, *HEAT OF SUBLIMATION, *HEAT OF FUSION, *TRIPLE POINT, SECOND VIRIAL COEFFICIENT, *ENTROPY, *ENTHALPY, *BOILING POINT, *SPECIFIC HEAT,

25536 PROGRESS ON AN EQUATION OF STATE FOR HYDROGEN.
GOODWIN,R.D.
NATL. BUR. STANDARDS CRYOGENIC ENG. LAB. NOTE NO. 65-5 (FEB 1965) 15 PP 1 FIG 5 TAB
A3 B1 C1 D1 E3 F1 G9 65
*HYDROGEN, *EQUATION OF STATE, *GASEOUS, *LIQUID,

25537 THE EQUATION OF STATE OF HYDROGEN AT HIGH PRESSURES.
ABRIKOSOV,A.A.
ASTRON. ZH. VOL 31, 112 (1954) (TRANS. BY RAND CORP., SANTA MONICA, CALIF., TRANS. NO. T-81, MAR 1958) 26 PP
DDC AD 605 743 A3 B1 C2 D1 E3 F5 G1 54
*HYDROGEN, *EQUATION OF STATE, VERY HIGH PRESSURE, *GASEOUS,

25543 EINIGE THERMODYNAMISCHE BEZIEHUNGEN FUR DIE TECHNISCHE ARBEITSFAHIGKEIT UND EIN EXERGIEDIAGRAMM FUR KOHLENDIOXYD.
THERMODYNAMIC RELATIONS FOR THE AVAILABILITY (EXERGY) AND AN EXERGY DIAGRAM FOR CARBON DIOXIDE.
GLASER,H.
KALTETECHNIK VOL 16, NO. 11, 345-48 (NOV 1964) 3 FIG 3 REF
A3 B3 C6 D3 E2 F7 G1
*FREE ENERGY, *ENTHALPY, FREON 12, *CARBON DIOXIDE, *REFRIGERANT, GASEOUS,

25544 SLUSH HYDROGEN.
CARAS,G.J.
REDSTONE SCI. INFORM. CENTER, REDSTONE ARSENAL, ALA., REPT. NO. RSIC-288 (SEPT 1964) 44 PP 17 FIG 10 TAB 17 REF
DDC AD 451 143 A3 B1 C6 D1 E2 F5 G6 64
*HYDROGEN, SLUSH, *PARAHYDROGEN, *HEAT OF FUSION, *MELTING CURVE, *PVT DATA, *LIQUID, *SOLIDIFIED GAS, *DENSITY,
A3 B1 C6 D1 E2
*HELIUM, *GASEOUS, *SOLUTION, SOLUBILITY, LIQUID, HYDROGEN,
A6 B1 C6 D1 E2
*HYDROGEN, SLUSH, *PRODUCTION, *STORAGE, *FLUID TRANSFER, *COOLING PROCESS, GAS INJECTION, CASCADE PROCESS, JOULE-THOMSON,

25559 DETERMINATION OF BULK MODULUS AND SONIC VELOCITY IN SUPERHEATED LIQUID HYDROGEN AND SUPERHEATED LIQUID DEUTERIUM.
NYALL,JOHN
CALIF. UNIV., LAWRENCE RAD. LAB., BERKELEY, REPT. NO. UCID-1234 REV. 1 (JAN 1961) 13 PP
A3 B1 C6 D1 E1 F8 G9 60
*HYDROGEN, *DEUTERIUM, *LIQUID, SUPERHEATED, BULK MODULUS, *VELOCITY OF SOUND, *PVT DATA, *SPECIFIC HEAT, MECHANICAL PROPERTY,

25590 THE ROLE OF CRYOGENICS IN THE PRODUCTION OF HIGH AND ULTRA-HIGH VACUUM.
MULLEN,L.O. MIZA,M.J. (NBS, CEL, BOULDER, COLO.)
CRYOGENICS VOL 4, NO. 6, 387-94 (DEC 1964) 2 FIG 4 TAB 40 REF
A6 B1 C1 D1 E2 F7 G1 64
*CRYOPUMPING, OUTGASSING, VACUUM TECHNOLOGY,
A2 B1 C8 D1 E2
*PERMEATION, *ELASTOMER, *RUBBER, HYDROGEN, OXYGEN, NITROGEN, METHANE, HELIUM, XENON, ARGON, CARBON DIOXIDE,
A3 B1 C1 D1 E2
*VAPOR PRESSURE, *ARGON, *OXYGEN, *NITROGEN, *METHANE, *CARBON DIOXIDE, ICE,
A2 B1 C1 D1 E2
OUTGASSING, METAL, *PLASTIC, *ELASTOMER, *NYLON, *TEFLON, *MYLAR, MINERAL, *STEEL, *STAINLESS STEEL, GLASS,

25604 THE SPECIFIC HEAT OF LIQUID HELIUM.
LOUNASMAA,O.V.
TURKU UNIV., FINLAND, LINCENTIATE (MASTER) OF PHILOSOPHY THESIS (1957) 44 PP 12 FIG 3 TAB 19 REF
A3 B1 C5 D1 E1 F9 G8 57
*HELIUM, *SPECIFIC HEAT, *LIQUID, *ENTROPY, LAMBDA TEMPERATURE, SATURATED LIQUID, *CRITICAL REGION,
A7 B1 C5 D1 E1
*THERMOMETRY, *HELIUM, VAPOR PRESSURE THERMOMETER,

25615 LIQUID STRUCTURE AND THE CONFIGURATIONAL PROPERTIES OF A SIMPLE FLUID.
MELROSE,J.C. (SOCONY MOBIL OIL CO., INC., DALLAS, TEX.)
AICHE 55TH NATL. MEETING, HOUSTON, TEX. (FEB 7-11, 1965) PAPER 46 PP 11 FIG 27 REF
A3 B1 C1 D3 E3 F8 G9 65
*EQUATION OF STATE, *LIQUID, LIQUID-VAPOR EQUILIBRIUM, *GASEOUS, *REDUCED VARIABLE, *CRITICAL REGION, *ARGON,

25699 COMPRESSIBILITY OF HELIUM AT -10 DEGREES TO 130 DEGREES F AND PRESSURES TO 4000 P.S.I.A.
STRCUD,L. MILLER,J.E. BRANDT,L.W. (BUR. MINES HELIUM RES. CENTER, AMARILLO, TEX.)
J. CHEM. ENG. DATA VOL 4, NO. 4, 51-52 (OCT 1959)
A3 B1 C8 D1 E1 F6 G1 59
*HELIUM, COMPRESSIBILITY FACTOR, *GASEOUS, *EQUATION OF STATE, SECOND VIRIAL COEFFICIENT,

17559 Viscosity and thermal conductivity of binary gas mixtures: argon-neon, argon-helium, and neon-helium.
Thornton,E. Baker,W.A.D.
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CNRS 24-3-5572 A3 B1 C8 D E1 F6 G1
*gaseous mixture, *binary system, *viscosity, *thermal conductivity, *argon, *helium, *neon

17607 Solid-solid phase transitions in He3, He4 and He3-He4 mixtures.
Vignos,J.H. Fairbank,H.A.
Bull. Am. Phys. Soc. 7 No. 1, Part I, 77 (1962)
CNRS 24-3-7787 A3 B1 C D E1 F6 G1
*helium, *solidified gas, helium 3, helium 3-helium 4, helium 4, *velocity of sound, solid-solid transition, *phase transition

17618 Equation d'etat pour des melanges de methane. Equation of state for mixtures of methane and ethane.
Vasserman,A.A. Zagoruchenko,V.A. Kasavchinskij,Ja.Z.
Zhur. Fiz. Khim. 36, No. 11, 2527-29 (1962) Trans. in Russ. J. Phys. Chem. 36, No. 11, 1375-77 (1962)
CNRS 24-3-9182 MF No. 507-A A3 B1 C0 D E F7 G1 62
*gaseous mixture, *ethane, *methane, *equation of state,

17638 Thermal conductivity of binary mixtures of gases.
Cotton,J.E.
Oregon Univ., Eugene, Ph.D. Thesis (1962) (Abstr. in Dissertation Abstrs. 23, No. 5, 1526, 1962)
CNRS 24-3-9340 A3 B1 C D E1 F9 G7
*thermal conductivity, *gaseous, *hydrogen, *gaseous mixture, *helium, *binary system, *hydrocarbon

17663 The second virial coefficient of gases and mixtures. Part 1. Carbon dioxide plus helium mixtures.
Cottrell,T.L. Hamilton,R.A.
Trans. Faraday Soc. 52, 156-60 (1956) 1 fig 1 tab 13 ref
MF No. 189-C A3 B1 C2 D1 E1 F7 G1
*carbon dioxide, virial coefficient, *gaseous, *equation of state, *gaseous mixture, *helium, *binary system

17730 Recherches experimentales sur la viscosite des gaz aux temperatures elevees. Experimental research on the viscosity of gases at elevated temperatures.
Vasilesco,Virgile
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*viscosity, *gaseous, *air, *argon, *nitrogen, *carbon dioxide,

17833 An approximate cell model for liquid hydrogen. I.
Henderson,D. Kim,S. Eyring,H.
Proc. Natl. Acad. Sci. U. S. 48, No. 10, 1753-59 (Oct 1962) 5 fig 1 tab 15 ref
MF No. 184-T A3 B1 C6 D1 E3 F6 G1 62
*hydrogen, excess property, *entropy, *internal energy, *specific heat, *liquid, *reduced variable;

17965 Critical phenomena in gases. I.
Lennard-Jones,J.E. Devonshire,A.F.
Proc. Roy. Soc. (London) A163, 53-70 (1937) 2 fig 3 tab 10 ref
MF No. 187-B A3 B1 C1 D1 E3 F6 G1 37
*critical region, *gaseous, *PVT data, *reduced variable, calculation, *hydrogen, *equation of state, *neon, *nitrogen, *argon, lennard-jones function, *atomic molecular property

17968 The thermal conductivity of organic vapours: The influence of molecular interaction.
Vines,R.G.
Australian J. Chem. 6 and 7, 1-26 (1953-54) 8 fig 7 tab 28 ref
MF No. 187-F A3 B1 C2 D1 E1 F7 G1
*thermal conductivity, *gaseous, *argon, *air, *methane, pressure effect, *organic fluid, *carbon dioxide, *ethane,

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MF No. 187-G A3 B1 C8 D1 E1 F7 G1
*gaseous, *thermal conductivity, *argon, *neon, *air, *carbon dioxide, *methane, *inorganic fluid, oxide of nitrogen,

17993 Critical phenomena in gases. II. Vapour pressures and boiling points.
Lennard-Jones,J.E. Devonshire,A.F.
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MF No. 187-K A3 B1 C1 D1 E3 F6 G1
*gaseous, *liquid, *neon, *reduced variable, *vapor pressure, *argon, *boiling temperature, calculation, *nitrogen,

17994 On the application of the principle of corresponding states to the thermal conductivity of the gaseous state.
Losenicky,Z.
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*reduced variable, law of corresponding states, *gaseous, *thermal conductivity, *methane, *hydrogen, *oxygen, *nitrogen, *neon, *helium, *argon, *rare gas, *carbon monoxide, *carbon dioxide

17998 Uber die koeffizienten der inneren reibung fur gemische zwischen argon und helium. The viscosity coefficient for mixtures of argon and helium.
Tanzler,P.
Verhandl. deut. physik. Ges. 8, 222-35 (Jun 1906) 1 fig 3 tab 20 ref
MF No. 187-Q A3 B3 C8 D1 E1 F7 G1 06
*argon, *helium, *gaseous, *gaseous mixture, *binary system, *viscosity, pressure effect, concentration effect

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Schmitt,Karl
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*air, *helium, *hydrogen, *argon, *nitrogen, *viscosity, *gaseous, oxygen, *gaseous mixture, *binary system

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Trautz,M. Binkele,H.E.
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*hydrogen, *helium, *neon, *argon, *carbon dioxide, *inorganic fluid, hydrogen chloride, *gaseous, *viscosity,

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*neon, *argon, *gaseous, *thermal conductivity, *helium, *hydrogen

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Ramsay,W. Young,S.
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*liquid, *vapor pressure, *ethylene, *oxygen

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Simon,F. VON Simson,C.
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*argon, *solidified gas, crystal structure, *density,

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*argon, *neon, *helium, *rare gas, krypton, xenon, *gaseous, *viscosity, temperature effect, *air

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Koeppe,W.
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inversion curve, *joule thomson coefficient, *helium, *neon, *argon, krypton, xenon, *hydrogen, *deuterium, *nitrogen, *oxygen, *carbon monoxide, *methane, *gaseous

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*helium, *velocity of sound, *liquid

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Pickering,S.F.
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*critical constant, *gaseous, *air, *acetylene, *neon, *ammonia, *argon, *butane, isobutane, *ethane, *carbon dioxide, *carbon monoxide, *ethylene, *helium, *hydrogen, krypton, *methane,

18045 Some boiling and triple points below 0 degree C.
Lovejoy,D.R.
Nature 197, No. 4865, 353-54 (Jan 1963) 2 tab 8 ref
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*boiling temperature, *carbon dioxide, xenon, krypton, *methane, *oxygen, *argon, *nitrogen, *carbon monoxide,

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A2 B3 C7 D1 E1 F7 G1
*nitrogen, *solidified gas, *atomic molecular property, crystal structure, x-ray, *density, spectroscopic data

18047 Thermodynamic diagrams of liquid helium.
Keesom,W.H. Keesom,A.P.
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A3 B1 C5 D1 E1 F6 G1
*helium, *liquid, *PVT data, *density, *compressibility,

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A4 B1 C5 D1 E3 F8 G5 G1
*helium, *solidified gas, solid-solid transition, molecular volume, intermolecular force, crystal structure, lattice parameter

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le Pair,C. Pacault,A.E. Das,P. delbrun Oubter,R.
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*helium, helium 3, helium 4, helium 3-helium 4, *liquid, pressure effect, lambda temperature, helium I, helium II, *melting curve

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*Joule-Thomson coefficient, air, *gaseous, *binary system, *hydrogen, *methane, *gaseous mixture

18107 The influence of a magnetic field on the transport properties of diatomic molecules in the gaseous state.
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A5 B1 C1 D1 E2 F6 G1
*inorganic fluid, *liquid, *solidified gas, *argon, *vapor pressure, compilation, bibliography, *neon, *carbon monoxide, *fluorine, *helium, *oxygen, *nitrogen, *ozone, *hydrogen deuteride, krypton, oxide of nitrogen, radon, xenon, *refrigerant,

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Miller,J.K. Brandt,L.W. Stroud,L.
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*helium, *gaseous, *PVT data, *nitrogen, compressibility factor,

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Barker,J.A. Monaghan,J.J.
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MF No. 186-T A5 B1 C7 D1 E3 F6 G1 G2
*argon, virial coefficient, Lennard Jones function, intermolecular force, *gaseous, *equation of state, *critical constant

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MF No. 178-X A5 B1 C6 D1 E1 F5 G1 G1
*neon, *isotope, *liquid, *vapor pressure, *entropy, *solidified gas, *triple point, *specific heat, debye constant

18167 Berechnung der Nullpunktsdichte einiger Elemente. Determination of the zero point density of several elements.
Herz,W.
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*density, *oxygen, *gaseous, *hydrogen, *nitrogen, zero point

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*methane, *enthalpy, T-H diagram, *liquid, *heat of vaporization, *gaseous, *specific heat, *vapor pressure, *Joule-Thomson

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*vapor pressure, *rare gas, krypton, xenon, *helium, *neon, *argon, triple point to critical point, *liquid, compressibility

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*helium, *solidified gas, saturated, *heat of fusion, *density, *compressibility, *specific heat, *expansivity, zero point energy, *liquid

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*critical constant, *vapor pressure, *nitrogen, *inorganic fluid, phosphorus trihydride, *density, sulfur dioxide, *methane, *hydrocarbon, propylene, *organic fluid, boiling

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*argon, *liquid, *specific heat, *viscosity

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*refrigerant, law of corresponding states, *vapor pressure, *liquid, *density, saturated liquid, *heat of vaporization,

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*oxygen, *nitrogen, *liquid, *solidified gas, *optical property, absorption, solid-solid transition

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*nitrogen, *inorganic fluid, nitrous oxide, nitric oxide, *gaseous, *gaseous mixture, *binary system, *thermal conductivity;
A3 B1 C2 D1 E1
*oxygen, nitrous oxide, *inorganic fluid, *gaseous,

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*neon, *gaseous, *liquid, *entropy, T-S diagram, *PVT data,

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*hydrogen deuteride, *solidified gas, saturated, *specific

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